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ABSTRACT

The guide covers the following subjects: Mental health, drug and substance abuse, alcohol, smoking, disease prevention and control, nutrition, consumer health, environmental and community health, and safety and first aid. The contents are divided into 10 areas according to the subject matter listed above. The contents are further divided according to grade. The guide has a spiral-bound paper cover. The objectives is to present effective health education programs to help students make sound choices of health behavior. Suggested activities are included for each topic. Audiovisual aids and selected references for teacher and student are listed according to subject areas. There is no instrument for assessing student progress. (PD)

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CURRICULUM BULLETIN · 1972-73 SERIES · NO. 10

HEALTH EDUCATION IN SECONDARY SCHOOLS

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Foreword

The concern for the health of our youth is greater today than ever before. A major school goal is to help our students make sound choices of health behavior. To this end, we join with the home and other agencies to present effective health education programs.

Health knowledge must be blended with attitudes. The extent to which students profit from their total educational experience, and the degree to which they are able to attain individual, family, and community goals are dependent largely on the level of the physical and emotional health that they attain and maintain. The schools play a vital role in this process.

This publication, *Health Education in Secondary Schools*, provides health information through meaningful learning experiences. It is hoped that this approach, responsive to the needs of our youth, will facilitate the translation of factual content into sound behavior patterns essential for creating a healthier and more humane society.

SEELIG LESTER
Deputy Superintendent of Schools

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INTRODUCTION

The effectiveness of health learning is determined by the way a student behaves, that is, the kind of action he takes with respect to his own health interests and needs, as well as those of his family and community. Health education, therefore, relies heavily upon the behavioral sciences.

This health curriculum was developed with the purpose of making it personally and socially relevant to the urban student in order to meet the important challenge of improving the quality of life in our cities. The improvement and safeguarding of one's health and that of the community is the unifying principle that gives meaning and significance to health education. Social consciousness, or personal responsibility to one's community, is developed as a basic philosophical foundation of this publication.

The curriculum materials presented in this bulletin cover a wide span of important health information and student activities. Since students, families, and communities vary in health needs and interests, it is essential that adaptations in emphases be made for each school, for each classroom, and for each student.

ORGANIZATION OF THIS BULLETIN

This bulletin includes suggested content and activities for each of the following nine topics: Mental Health (including some aspects of Family Living), Drug and Substance Abuse, Alcohol, Smoking, Disease Prevention and Control, Nutrition, Consumer Health, Environmental and Community Health, Safety and First Aid. Except for the latter topic, content and suggestions are included for students in grade 8 and grade 11. It is recommended that the teacher study the content for both these grades and make appropriate selections from either grade.

Generalizations are summarized for each topic, grade 8 on pages 5 and 6, grade 11 on pages 7 and 8. Relevant content is presented sequentially for each generalization on succeeding pages. The rationale for this organization is consistent with the idea that content is best translated into behavior when it is presented conceptually. Suggested student activities are presented for specific content, thus reinforcing student development of basic health concepts.

A complete listing of audio-visual and bibliographical materials, referred to in the Suggested Student Activities, may be found on pages 295-315 (Audio-Visual Materials) and pages 317-341 (Bibliography).

QUESTIONS FOR TEACHER CONSIDERATION

In preparing this bulletin consideration was given to basic questions pertaining to learners, content of the curriculum, and our present-day urban society. In order to use this bulletin effectively, it is important that teachers consider each of these questions in relation to their particular educational situation.

Learners

1. What are the needs, interests, and problems of students?
2. What are their attitudes and practices in regard to their health?
3. What are their socio-economic backgrounds?
4. What are their sources of health information?
5. What are their values and attitudes regarding health?

Content of the Curriculum

1. What methods of inquiry are unique to health instruction?
2. Are relevant health concepts included at students' most appropriate developmental levels?
3. Do the health concepts reflect current scientific knowledge?

4. Are health concepts related to the needs of students and society?
5. How may health education contribute to the objectives of education in general?

Present-Day Urban Society

1. What does one need to know in order to make decisions regarding one's health or the health of his family and community?
2. What major societal problems relate to health education?
3. How does health instruction enable one to adapt better to social forces and trends?
4. What resources are available in the community for reenforcing learning opportunities in health instruction?

THE TEACHING-LEARNING SITUATION

A variety of teaching and learning approaches have been incorporated into this bulletin. Some of these approaches are presented here in outline form. The teacher will select for emphasis those approaches which are best suited to the needs of the students and the development of the content.

Group Discussion

○ is based on peer interaction
○ provides opportunites for students to bring about affirmative health changes in students.
○ indicates to students ways to bring about changes in others

Problem Solving

○ includes identifying the problem, clarifying and analyzing elements, collecting data, organizing and using data in formulating possible solutions, judging value of tentative solutions, testing solutions
○ leads to the practical applications of health practices and wholesome health attitudes
○ is an essential aspect of research and reporting

Brainstorming

○ elicits from students spontaneous responses regarding a problem or topic
○ includes recording of all suggestions, discussion of the merits of suggestions, and efforts to seek agreement on the most appropriate solution to a problem
○ may generate analytical and creative thinking

Buzz Session or Small-Group Discussion

○ involves committee organization in which students interact with one another
○ involves exploration of various aspects of a problem or of related problems

Self-Appraisal

○ involves student evaluation of his own strengths and limitations with respect to some aspect of health, such as eating habits and physical exercise
○ provides student with insight into his own health needs
○ aims to motivate student toward self-improvement

Socio-Drama or Role-Playing

○ is used as a means of exploring certain problems usually related to the area of human relations
○ may involve a spontaneous dramatization or may be planned to dramatize a life situation
○ may involve the playing of roles as a basis for discussion and analysis in order to clarify the human dynamics of a situation

- enables student to participate in lifelike activities with a view toward understanding himself in terms of the reality of his home, school, and community environments

Class Reporting

- constitutes a presentation of information gathered by several students and presented as a report to class
- encourages student involvement in research and reporting, and permits in-depth study of a specific health problem or issue
- provides student with an opportunity to organize and present comments on a specific subject

Panel Discussion

- involves the discussion of a problem by a committee of students
- involves student reaction to views presented by the panel
- enables students to exchange points of view
- provides opportunities for students to evaluate their own contributions and those of their peers
- may motivate students by capitalizing on the controversial aspects of a problem

Demonstration

- is used to illustrate a principle, show a technique or procedure, or establish certain facts
- provides a basis for drawing conclusions about a health problem in such situations as the demonstration of the smoking machine

Field Trip

- provides a firsthand experience of a process or program, such as a water purification plant, a drug rehabilitation center, etc.
- may provide the basis for further research and study
- may facilitate understanding of community problems

The Film as an Audio-Visual Aid

- stimulates discussion of health issues
- serves as a means of demonstrating skills such as those in first aid, safety, etc.
- provides an audio-visual supplement for better understanding of complicated information or procedures
- adds realism to analysis of health issues such as problems of drug addiction, etc.

The Filmstrip as a Visual Aid

- is convenient, usually low in cost, easy to store
- shows activities in a logical sequence
- provides for class discussion at various points since the filmstrip can readily be interrupted

The Record and Tape Recording as an Auditory Aid

- preserves and presents recent or dated verbal accounts of health content
- may be synchronized with a filmstrip

The Transparency as a Visual Aid

- is relatively inexpensive and readily prepared
- may be arranged and re-arranged in any desired sequence
- stimulates discussion during and after viewing

SUGGESTED TIME ALLOTMENTS

It is recommended that health instruction in secondary schools be programmed on a four or five times a week basis for a single semester, preferably in the eighth grade of the intermediate school or junior high school and in the eleventh grade of the senior high school. This organizational pattern enables teachers to carry out sustained daily instruction over an extended period of time commensurate with student needs, interests, and problems.

Time allotments in terms of minimum numbers of class periods (of 40 or 45 minutes each) are presented in the table below for the nine topics developed in this bulletin. The numbers of class periods indicated are suggested only and are presented merely to help supervisors and teachers plan a health instruction pgrogram for the year. Flexibility is essential in making and in implementing such plans in order to provide for the changing and varying needs of the students, the school, and the community.

SUGGESTED MINIMUM NUMBER OF CLASS PERIODS

Topic	*Grade 8*	*Grade 11*
Mental Health	7	14
Drug and Substance Abuse	13	18
Alcohol	6	8
Smoking	6	8
Disease Prevention and Control	10	12
Nutrition	5	8
Consumer Health	7	8
Environmental and Community Health	7	10
Safety and First Aid	11	—

EVALUATION

The process of evaluation in health education is a method of determining to what extent and at what depth changes in health behavior have taken place on the part of secondary school students. Suggested evaluation procedures follow:

1. Rating and checklist procedures to assess the cognitive or affective outcomes of instruction.
2. Anecdotal records and observations to appraise the noncognitive outcomes of health education.
3. Essay tests for assessing certain kinds of behavioral changes.
4. Objective tests for appraising recall of knowledge and more complex cognitive abilities.
5. Standardized achievement tests for assessing outcomes and content common to health education programs citywide.
6. Oral tests to facilitate the appraisal of health understandings for students with language difficulties.

GENERALIZATIONS

GRADE 8

MENTAL HEALTH

Personality development is influenced by the interrelationship of hereditary and environmental factors.

Adolescent needs are satisfied in a variety of ways.

Adolescence is a transitional period characterized by an intensive striving toward emotional and social adjustment.

DRUG AND SUBSTANCE ABUSE

Drugs, when properly used, are beneficial to man.

Drugs and chemical substances may be classified in terms of derivation or effect.

There are social, psychological, and environmental factors related to drug abuse and its prevention.

Government agencies have specific responsibilities to regulate and control the use of drugs.

Treatment and rehabilitation techniques and programs aim to help drug-dependent individuals become drug free and capable of assuming a responsible role in the community.

ALCOHOL

A knowledge of the historical background of the use of alcoholic beverages contributes toward an understanding of attitudes on drinking.

Consumption of alcoholic beverages affects the body.

There is a relationship between consumption of alcoholic beverages and behavior and personality.

Alcoholism affects the individual, the family, and the community.

SMOKING

Smoking is a critical health problem

Smoking has a harmful effect on the body.

There are social and psychological factors that contribute to the smoking habit.

DISEASE PREVENTION AND CONTROL

Communicable diseases are caused by microorganisms transmitted directly or indirectly from infected persons or animals.

Prevention and control of communicable diseases are related to blocking pathways of infection, improving body resistance, and providing early treatment.

Communicable diseases still remain an important concern for the community despite modern advances in medical science.

Chronic ailments are leading causes of disability and death.

NUTRITION

Nutrition affects one's physical growth and development through its interplay with hereditary and environmental factors.

Nutrition affects physical growth and appearance by its influence on the body.

Nutrition affects personality, vigor, and ambition.

Good nutrition requires a sufficient amount of nutrients for proper body functioning.

Good nutrition requires a proper balance of nutrients.

Good nutrition is promoted by establishing good food habits and good attitudes toward food.

A continuous check of one's nutritional status may be made by keeping a record of body measurements, especially height and weight.

CONSUMER HEALTH

Good judgment in the selection and utilization of health services and products enhances health and saves money.

Quackery is dangerous to health.

Advertising may mislead individuals in their selection and use of health information, products, and services.

Governmental and professional groups protect the public from fraudulent health practices.

ENVIRONMENTAL AND COMMUNITY HEALTH

Man's health and well-being are related to his interaction with the environment.

Air pollution, a serious public health problem, is a product of increased population and heavy industrialization.

Water pollution, a menace to our health and a threat to the economy, contributes to the ever-growing problem of water shortage.

Widespread use of chemicals in combating pests has created additional environmental health hazards.

Noise pollution, with its potential effect on health, has become an important environmental problem.

Continuous use of radiation or radioactive material presents numerous potential health hazards.

SAFETY AND FIRST AID

Potential for accidents exists everywhere in man's environment.

Individuals should be prepared to act effectively in case of accidents.

GENERALIZATIONS

GRADE 11

MENTAL HEALTH

Personality is related to the satisfaction of human needs at each successive stage of development.

Maturity is the quality that enables individuals to meet physical, intellectual, social, emotional, and economic demands adequately.

Dealing with stress is related to personality.

Adaptation is a means of coping with stress.

Emotional maladjustment has an impact on the individual and society.

Improved understanding of mental retardation may result in significant progress in overcoming this condition.

DRUG AND SUBSTANCE ABUSE

Drugs and chemical substances may be classified in terms of derivation or effect.

An understanding of the underlying social, psychological, and environmental factors is the basis of a preventive program of drug and substance abuse.

Government and private agencies have responsibilities for treatment and rehabilitation programs dealing with drug and substance abuse.

ALCOHOL

A variety of interacting psychological and sociocultural factors influence teen-age drinking.

The use of alcohol affects the body and one's behavior.

Alcoholism affects the individual, the family, and the community.

SMOKING

Smoking adversely affects health.

Attitudes toward smoking are currently undergoing major changes in our society.

Social and psychological factors contribute to the smoking habit.

DISEASE PREVENTION AND CONTROL

Infectious disease process involves causative agents, means of transmission, and entry into the body.

Prevention and control of communicable disease are related to source of infection, mode of transmission, body resistance, immunization, and chemothereapy.

Infectious diseases remain an important concern for the community despite modern advances in medical science.

Chronic ailments are important causes of disability and death.

NUTRITION

An adequate and well-balanced diet is essential to optimum health.

The health problem of hunger and malnutrition in low-income families is a serious one in the United States.

Overweight is one of the most common forms of malnutrition in the United States.

Good nutrition is promoted by preparing and using foods for maximum nutritional value.

There is an important relationship between nutrition and prenatal and infant health.

Responsibility for nutritional health rests with the individual, family, and community.

CONSUMER HEALTH

Consumer behavior is influenced by many factors.

Using sound criteria helps individuals make intelligent choices in securing professional health services.

Providing the consumer with adequate and quality health care is an important community concern.

ENVIRONMENTAL AND COMMUNITY HEALTH

Man's expanding environment is adding new hazards to his health.

Utilization of community health resources benefits the health of the individual and the community.

Nations are dependent upon one another to promote health and to solve health problems.

Man's quest for knowledge is opening up new health career opportunities.

MENTAL HEALTH: Grade 8

Generalizations

PERSONALITY DEVELOPMENT IS INFLUENCED BY THE INTERRELATIONSHIP OF HEREDITARY AND ENVIRONMENTAL FACTORS. 10

ADOLESCENT NEEDS ARE SATISFIED IN A VARIETY OF WAYS. 11

ADOLESCENCE IS A TRANSITIONAL PERIOD CHARACTERIZED BY AN INTENSIVE STRIVING TOWARD EMOTIONAL AND SOCIAL ADJUSTMENT. 12

PERSONALITY DEVELOPMENT IS INFLUENCED BY THE INTERRELATIONSHIP OF HEREDITARY AND ENVIRONMENTAL FACTORS

Content	*Suggested Student Activities*
Mental health is reflected in how we feel about ourselves, and is related to the way an individual gets along in his family, at school, and at play.	Responds to the question: "What do I like about myself?"
Personality is a composite of qualities or traits which give the individual an identity of his own.	Discusses relationship between mental health and personality development.
Factors that make us similar to or different from others are our heredity, our physical environment, and our social and emotional experiences.	
Heredity is the sum of qualities and potentialities passed on genetically from one's parents, grandparents, etc.	Indicates physical characteristics similar to those of parents and/or grandparents. Discusses attitudes toward these characteristics.
Each individual has a unique pattern and schedule of growth.	Indicates physical characteristics different from those of parents and/or grandparents. Explains reasons for these differences.
Among the hereditary factors which affect personality are intellectual potentialities, physical appearance, and physical growth.	Participates in making a survey of heights of students in class to show diversity. Illustrates results on a bar graph.
Intellectual potentiality is modified by one's environment.	Discusses effect of nutrition and education on intellect. Discusses reasons why children of immigrants are on the average taller than their parents.
Physical appearance is a primary concern of teenagers; it affects how they feel about themselves.	Discusses how an individual may modify his physical appearance.
	Lists current fads in dress, use of cosmetics, and hair styling. Explains reasons for adopting these fads.
The physical, social, and emotional factors which shape personality development include:	Using filmstrips, such as *Human Growth and Development*, discusses how the physical environment influences inherited traits.
Occupation of parents Family income Home and neighborhood Religious, racial, and ethnic background Nutrition Exercise Medical care	Reads a biography about an admired person and prepares a report indicating important influences in this persons life.
	Reads and reports on recent studies of the effects of nutrition and malnutrition.
	Lists current TV family situation shows. Selects one for analysis of family relationships using the following questions as a guide:

Content	*Suggested Student Activities*
	Was the parent's occupation a significant factor in determining family relationships? Why? Do the family members love one another? How can you tell? What kind of neighborhood does the story take place in? Is the story realistic? Why?

ADOLESCENT NEEDS ARE SATISFIED IN A VARIETY OF WAYS

Content	*Suggested Student Activities*
A healthy personality is dependent on the fulfillment of basic physical, emotional, and social needs.	
Basic physical needs include: Hunger Thirst Rest Sex Activity	Reports on practices used by primitive people to satisfy their basic physical needs. Compares practices of primitive people with those found in highly developed nations. Writes about a personal experience dealing with a time when a physical need was not met. Indicates reactions to this experience.
Psychological or emotional needs include: Love, acceptance, and belonging Status and achievement Security Independence and self-identity	Selects a character from literature and describes how this character's emotional needs were or were not met. Indicates kind of behavior exhibited by the character when emotional needs were not met. Indicates opportunities available in school and/or the community to satisfy a need for status and achievement.
Social needs include: Participating actively in experiences with others Sharing with others Conforming with peers	Discusses how failure to satisfy social needs affects one's social development. Describes a situation in which personal views were in conflict with the desires of the group. Indicates how this problem was resolved.
Adolescent behavior is a reaction to the gratification or frustration of needs.	Discusses ways in which various means of expressing emotion through behavior can serve either to foster or hinder personal development.

Content	*Suggested Student Activities*
When a need is blocked or frustrated, one expresses a feeling of annoyance, anger, or fear. An individual may not always react to a similar frustrating situation in the same manner.	Describes a recent personal experience dealing with anger. Tells who was involved, why it happened, what was done about it. Indicates probable reactions to a similar situation today and discusses reasons.
At each state of development, an individual is expected to be more emotionally and socially mature then he was at an earlier point in life.	Compares characteristics and needs of children at each of the following levels of development: infancy, early childhood, later childhood, adolescence. Discusses probable effects of unmet needs at an earlier level on individuals reaching later levels of development.
The individual's ability to cope with problems determines whether frustrations lead to personality difficulties or to satisfying adjustments.	Discusses how people benefit when they succeed in overcoming serious difficulties in their life.

ADOLESCENCE IS A TRANSITIONAL PERIOD CHARACTERIZED BY AN INTENSIVE STRIVING TOWARD EMOTIONAL AND SOCIAL ADJUSTMENT

Content	*Suggested Student Activities*
Physical changes involved in the transition from childhood to adolescence are identified as puberty. Major physical changes which take place at puberty are caused by hormones from the pituitary gland. Physical changes during puberty are often accompanied by increasing self-awareness and anxieties. Emotional and social adjustment during adolescence involves developing effective and satisfying methods of dealing with daily problems.	Views filmstrips, such as *Becoming a Man: Maturation and Growth* and *Becoming a Woman: Maturation and Growth*. Discusses physical changes during puberty and how they relate to anxieties and tensions of growing up.
In order to develop emotional and social maturity adolescents need to accomplish certain tasks which include:	Interviews parents to find out what new problems the parents have to contend with now that they have adolescent children.
Achieving new and more mature relations with peers of both sexes Achieving more mature masculine or feminine sexual, emotional, and social roles	Discusses areas which are likely to present special difficulty or produce emotional stress for adolescents as they enter junior high school.
Accepting one's physical appearance and using the body effectively	Plays a role depicting a situation in which a teen-ager feels inadequate about his physical appearance.

Content	*Suggested Student Activities*
Achieving emotional independence from parents and adults Achieving assurance of economic independence Selecting and preparing for an occupation	Shares experiences indicating ways to achieve independence from parents. Discusses how the practice of having weekly allowance helps a teen-ager develop responsibility in budgeting.
Preparing for marriage and family life During adolescence, the individual matures through a variety of social experiences.	Participates in buzz groups discussing problems which may characterize each of these: The only child The youngest child The oldest child The middle child
Influence of Family Living.[1] The family is a society in miniature with traditions and codes that closely resemble those found in the community.	Compares family life in the United States today with family life at the turn of the century—roles of father, mother, and grandparents; factors that have influenced changes in roles.
The ability to get along with others is developed initially within the family through relationships with parents, siblings, and other family members. Attitudes, ideals, and values are initially developed within the family. As teen-agers mature and achieve independence, the impact of family attitudes, ideals, and practices change.	Discusses characteristics of a family which are conducive to the emotional and social growth of all members of that family. Indicates problems often created because of the needs of a young adolescent in the family. Discusses responsibilities of the adolescent in such a family.
Influence of Peer Group. Socialization also occurs independent of family relationships. It begins when the child plays outside of the family. The adolescent makes efforts to free himself from his family through membership in peer groups. He seeks emotional support from these groups. Such support is necessary for his independent functioning.	Discusses for each of the following problems whom to ask for help and why: Threats by neighborhood gangs Not understanding a homework assignment Being challenged to use drugs Not being allowed to go out on dates Feeling awkward and/or uncomfortable at a school dance
The selection of a friend is often dependent on similarity of interests, willingness to confide in the other, and depth of understanding on the part of both individuals.	Writes on the theme: An Ideal Friend. Discusses to what extent a best friend measures up to this ideal and to what extent he (the student) also measures up to this ideal.
Group membership usually helps to gratify basic needs and assists the adolescent in understanding his sexual role as a male or her sexual role as a female, as well as relationships to the opposite sex.	

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[1] For a comprehensive treatment of family living, see *Family Living Including Sex Education* (Curriculum Bulletin No. 3, 1969-70 Series).

Content	*Suggested Student Activities*
Dating. Group and/or individual dating provide special opportunities for understanding oneself and the other sex. The adolescent's decisions regarding dating are influenced by: Family codes Adolescent value system Community norms Adolescent's personal set of values Responsibilities associated with dating include: Parental understanding and approval Dating behavior Consideration for the dating partner Cost related to dating Physical intimacies Group and/or individual dating during early adolescence may provide the social growth needed for later dating, engagements, and the selection of a life partner.	Views filmstrips, such as *Human Growth and Development*. Discusses dating as a part of growth and development. Discusses questions such as the following: What do girls like about boys? What do girls dislike about boys? What do boys like about girls? What do boys dislike about girls? Arranges a co-ed panel to discuss the responsibilities of boys and girls when dating individually or as a group. Includes problems such as: How to ask for a date How to accept or reject a date The boy's role as a dating partner The girls's role as a dating partner Investigates parents' roles regarding adolescent dating.
Accepting responsibility in boy-girl relationships is related to social and emotional maturity.	Discusses advantages and disadvantages of going steady. Plays a role in a situation which involves a conflict between family and daughter about dating. Discusses why conflicts over dating rarely occur between family and boys.
Sexual behavior is influenced by family and community attitudes, and one's personal code of values. Irresponsible sexual behavior may: Invoke conflicting feelings Lead to health hazards Result in premarital pregnancy Community resources can assist in the prevention and amelioration of problems arising from irresponsible sexual behavior.	Views filmstrips, such as *Being Responsible About Sex and Love*, as a motivation for a panel discussion involving parents and pupils on the subject of teen-age sexual behavior. Invites a clergyman, a counselor, or other professional resource person to participate in a discussion on aspects of irresponsible sexual behavior. Prepares a list of community agencies that provide counseling and assistance for young people.

MENTAL HEALTH: Grade 11

Generalizations

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PERSONALITY IS RELATED TO THE SATISFACTION OF HUMAN NEEDS AT EACH SUCCESSIVE LEVEL OF DEVELOPMENT

Content	*Suggested Student Activities*
Personality is the total reaction of an individual to everything that has ever happened to him.	Discusses how personality development is affected by each of the following: Community environment Education Family Physical appearance Physical health Religion
Personality is continuously in a state of development.	Makes a self-appraisal of his own personality development from early childhood to the present. Indicates factors which have had significant impact on the personality.
Behavior is an expression of personality.	
Each individual has basic physical and psychological needs.	
Physical Needs. The physical drives of man constitute some of his basic human needs. They include: Hunger Thirst Sleep Sex	
Security Needs. The need for security or safety exists throughout life and is expressed differently at different levels of development.	Considers the premise that adolescence is usually characterized by a breaking away from parental control. Describes ways in which teen-agers express their need for protection and security in family relationships. Indicates conflicts that may result when an adolescent seeks greater independence.
Love and Belonging Needs. The needs for love and belonging are fulfilled initially by one's family. As individuals mature, peer acceptance on a group or individual basis takes on greater importance.	Reacts to the following statement from *The Ides of March* by Thornton Wilder: "There is great comfort in knowing that those who love you love you enough to take the responsibility for marking out the permissible."
	Discusses reasons for belonging to a group.
Self-Esteem Needs. The need for self-esteem or the need to be a unique individual develops gradually from birth, and continues throughout life.	Indicates factors that may inhibit and/or enhance satisfying the need for self-esteem.
	Writes anonymously about these subjects: What I like about myself. What I don't like about myself. What kind of person I would like to be.

Content

Self-Actualization Needs. The need for self-actualization or self-realization is the need to do what one is capable of doing to achieve a feeling of fulfillment.

Suggested Student Activities

Selects an admirable person. Discusses whether he has high or low self-esteem. Gives evidence. Indicates factors that contributed to these feelings about himself.

Discusses how the following statement might describe the feelings of some teen-agers of being left out or alienated:

> Young people want to be something more than "puppets" who do what they are told, more than good boys and girls who conform and have no individuality. They want to be persons in their own right.

MATURITY IS THE QUALITY THAT ENABLES INDIVIDUALS TO MEET PHYSICAL, INTELLECTUAL, SOCIAL, EMOTIONAL, AND ECONOMIC DEMANDS ADEQUATELY

Content

Each age level brings with it new demands—physical, intellectual, social, emotional, and economic.

Maturity is the quality that enables the individual to meet these demands in an adequate manner.

Emotional Maturity. Characteristics of emotional maturity include:

Facing reality, which involves accepting one's capabilities and limitations.

Adapting to change, which involves maintaining an open-minded approach to life.

Functioning independently, which involves planning one's life and following through with these plans.

Being free from stresses of tension, which involves recognizing feelings, being able to control the expression of feelings when desirable, and having a tolerant attitude toward oneself and others.

Having concern for other people, which involves respecting and accepting differences among people and being interested in their rights and happiness.

Suggested Student Activities

Reacts to the following statement made by a high school student at a "rap session":

> I now understand the excuses that I use concerning my abuse of drugs, and I understand more fully the reasons of others for not taking drugs. I find that my attitudes stem from feelings of insecurity and immaturity.

Discusses the following: The adolescent can become independent only by trying to be independent.

Content	Suggested Student Activities
Having the ability to love, which involves being able to feel and to express affection for others.	Reacts to the statement: Before a person can love others, he must learn to accept himself.
Working productively, which involves being able to work effectively at school, at home, and on the job.	
Social Maturity. The concern of the socially mature individual extends beyond the gratification of his own needs to include an interest in the well-being of others. Characteristics of social maturity include:	Discusses the question: Does social maturity mean adapting to the status quo, or might it also include working for changes in society?
Social ethics, which are reflected in behavior in consonance with the accepted ethics of one's culture.	
Cultural open-mindedness, which avoids cultural prejudices based on ethnic, religious, or economic characteristics of other groups.	
Interpersonal relationships, which involves interest and regard for the well-being of others.	Discusses personal ideas about a good leader and indicates how respecting the feelings of others affects leadership.

DEALING WITH STRESS IS RELATED TO PERSONALITY

Content	Suggested Student Activities
An important aspect of growing up is learning how to deal with conflicts.	Views films, such as *Mr. Finley's Feelings*.
A conflict is a struggle betweeen what a person wants and what he [illegible] have. Technically, this may be expressed as a struggle between motivational opposites.	
Frustration results when motivation or behavior is blocked because of the conflict.	
Serious frustrations are those arising from personal deficiencies, especially if the ability or quality or need is important for one's self-esteem at a particular level of development.	Discusses how a serious deficiency in athletic ability may affect a male high school student. Discusses shortcomings that sometimes trouble a female high school student.
Frustration, like conflicts, are to some extent unavoidable, and therefore one should recognize	Reacts to the following statement about the teen-age drug scene:

Content	*Suggested Student Activities*
the importance of deferring gratification of needs and desires at different stages of his life.	**Those most attracted to drugs are those who are bored and cannot tolerate stress or frustration. The drug fits their emotional discontent and removes the necessity to plan, to struggle, to endure.**
Typical areas of adolescent problems include: Becoming economically independent	
Developing interpersonal relationships with other sex	Discusses the conflicting standards of and attitudes toward sexual behavior which exist in our society.
Developing educational plans	
Resolving value conflicts between individual and community	Reacts to the following statement relative to the generation gap: **Free communication between adolescents and adults is difficult, so much so that many wise observers doubt that differences between the generations in a rapidly changing society can be bridged. Perhaps the most that can be hoped for is mutual tolerance, sincere negotiation, and relatively peaceful coexistence.**
Reaching conclusions about problems through a constructive decision-making process involves: Appreciating the issues at stake Making a decision that results in eliminating one of the conflicting factors Accepting one's final decision	Discusses how each of the following might become a problem to the high school student and how the problem might be resolved: Going steady Friends who use drugs Working while going to school Planning post high school goals
The adolescent's need for new experiences, his greater awareness of moral principles and social expectations, and an increased need for conformity, recognition, and social approval may all set the stage for conflicts and frustrations.	Interprets the following statement: **Both conforming and nonconforming teen-agers are responding to the same set of social realities, and each of these groups of teen-agers tries to master these social realities in his own way—one by beating the establishment at its own game, the other by refusing to play.**
The capacity to cope with problems determines whether conflicts or frustrations lead to personality difficulties or to satisfying emotional and social adjustments.	Lists the social realities referred to in the preceding statement. Indicates how the conforming teen-ager "beats the establishment at its own game." Discusses why the nonconforming teen-ager chooses not to "play the game."
Since many teen-agers lack experience and maturity, they may not be prepared to deal effectively with conflicting or frustrating situations.	Discusses resources in school and/or community that are available to advise students on personal problems.

ADAPTATION IS A MEANS OF COPING WITH STRESS

Content	*Suggested Student Activities*
Adaptation is the means by which an individual deals with his environment.	Reacts to the following statement: **The advertising media have given our young people the idea that there is something you must take to get up, something you should take to go to sleep or relax, and something you must take for tensions before tests.** Discusses alternatives for drug-taking as a means of relieving feelings of anxiety.
Positive adjustment occurs when an individual, within his own limitations, learns to react to himself and his environment by mature, responsible, and satisfactory means.	Interprets and discusses the following statement by Erik H. Erickson: **There is a "natural" period of uprootedness in human life: adolescence, Like a trapeze artist, the young person in the middle of vigorous emotion must let go of his safe hold on childhood and reach out for a firm grasp on adulthood, dependent for a breathless interval on his training, his luck, and the reliability of the "receiving and confirming" adults.**
Defense Mechanisms: Defense mechanisms are methods of adapting to the environment learned early in life. These mechanisms were used originally to protect one's self-concept or security.	
Defense mechanisms enable individuals to deal with emotional conflicts by avoiding awareness of the unpleasant, anxiety-producing stress situations. Some defenses block healthy expressions of instinctual or unconscious impulses and therefore lead to an unhealthy or neurotic breakthrough. Some typical defense mechanisms are:	Indicates how social situations, such as dances, parties, and dating evoke anxiety. Plays a role to demonstrate one or more of a variety of defense mechanisms used for resolving problems. After role playing, discusses: The inner conflict involved The defense mechanisms used Whether the use of defense mechanism was helpful or not How else the problem might be resolved
Avoidance, which means sidestepping anxiety-producing situations.	Indicates how the popular phrase "everyone does it" resolves conflicts for teen-agers. Gives examples of situations in which this phrase might be used. Discusses the inner conflict involved.
Repression, which means forgetting, or restricting to the unconscious mind, an event, feeling or memory.	
Projection, which means supporting one's self-image by unconsciously attributing certain things to others.	
Regression, which is the return of parts of one's personality to an earlier stage of life to escape anxiety.	
Rationalization, which means avoidance of inner conflict or failure by explaining it away or finding a good excuse for it.	

Content

Compensation or sublimation, which involves redirecting feelings and behavior into acceptable and useful activities.

Successful functioning as an adult may be achieved by the adolescent if his adaptive and defensive mechanisms permit healthy expression of instinctual or unconscious impulses.

Suggested Student Activities

Discusses how a high school student, who is too small for athletic competition or too shy to be a social success, might compensate for these inadequacies and achieve an emotionally, healthy adjustment to life. Makes comparisons with students who use avoidance, projection, rationalization, or projection as a defense.

EMOTIONAL MALADJUSTMENT HAS AN IMPACT ON THE INDIVIDUAL AND SOCIETY

Content

The emotionally healthy person adapts well to his environment by coping with the stresses of life. He chooses appropriate methods of resolving problems, has a realistic sense of personal worth, and interacts constructively with others.

Mental illness, the inability to adapt adequately to one's environment, may be related to physical and/or emotional factors.

There are various types of mental illnesses, and they differ in extent to which they interfere with one's ability to function in everyday life.

Mental illness is a serious health problem accounting for the use of more hospital beds than any other single disease or illness.

Mental disorders should be brought to the attention of a specialist as early as possible for proper diagnosis and treatment.

To help the mentally ill, it is necessary to consider the prevention, treatment, and rehabilitation of individuals.

NEUROTIC DISORDERS

Every normal individual has some neurotic symptoms because of anxiety produced by conflicting wishes and resultant emotional tension.

When effective functioning becomes difficult, a neurotic disorder exists, and professional assistance is needed.

Suggested Student Activities

Discusses guidelines for determining whether specified behavior is healthy.

Reacts to the statement: The less a person knows about mental illness, the more likely he is to consider it a disgrace. Discusses changing attitudes toward mental illness.

Reacts to the following statement by the late Dr. Karl Menninger: "Most people have some degree of mental illness at some time, and many of these have some degree of mental illness most of the time." Compares these terms, mental illness and insanity.

Participates in making a survey of mental health facilities in the community, such as public mental health clinics, psychiatric wards in local hospitals, children's psychiatric clinics, local mental health societies, rehabilitation centers, workshops, halfway houses, etc.

Participates in arranging for a visit to a mental health facility. Reports observations to class.

Individuals with neurotic disorders do not lose contact with the realities of their environment.

Neurotic disorders may be classified by their outstanding symptoms. Examples of such disorders follow:

Anxiety reaction, which involves a feeling of apprehension or dread that something unpleasant is going to happen.

Anxiety is neurotic when there is no apparent cause for its occurrence or where a very slight cause results in a highly exaggerated response.

Anxiety can cause a number of physical symptoms, such as headaches, indigestion, chronic fatigue, dizziness, loss of appetite, vomiting, etc.

The individual with an anxiety reaction usually seeks a physical explanation for his distressing mental state.

Conversion reaction or conversion hysteria, which is a disturbance which may result in a sudden loss of vision, hearing, or paralysis of part of the body.

The symptoms that develop in a conversion reaction provide inadequate solutions to inner conflicts experienced by the individual.

Adequate solutions to inner conflicts can be provided only through psychotherapy which helps the individual face his conflicts and then to make choices in consonance with his personal needs and his environment.

Obsessive-compulsive reaction, which is a disturbance manifested by an obsessive thought about something the individual does not want to think about or a compulsion to do something that he does not want to do.

An obsessive or compulsive reaction may occur if an individual has a repressed thought or wish which he doesn't want to face.

When the individual is occupied with obsessive thoughts or compulsive acts, he does not have opportunity to think of the dis-

Discusses the significance of the follwing statement:

Anxiety is a common health disturbance in adolescence, and you have to deal with it to help the individual treat the anxiety just as you do the specific physical complaint.

Discusses the significance of the following statement:

Young people with emotional problems hurt. Whether the symptom is anxiety or depression, the pain can be as real as the physical kind.

Discusses the question: Why does a compulsive act frequently take the form of a ritual?

Content	*Suggested Student Activities*
tasteful thought that is being kept repressed.	
Kleptomania, the compulsive urge to steal, and pyromania, the compulsion to set fires, are serious forms of obsessive-compulsive reactions.	
Phobic reaction, which involves an intense fear of a specific thing or situation that is of no real danger to the individual or that has been blown out of proportion to the actual danger.	
The principal causes of phobias are traumatic experiences or conflicts that an individual may have had and forgotten. Anything that makes the individual aware of that traumatic experience may stimulate the phobic reaction.	
Acrophobia, a fear of high places; agoraphobia, a fear of open places; and claustrophobia, a fear of closed places, are some examples of phobic reactions.	
Depressive reaction, which involves a neurotic depression in which feelings of depression occur without apparent cause.	Compares mourning on the part of a person suffering a deep personal loss with the depression of an individual having a neurotic depressive reaction.
Feelings of neurotic depression are usually of long duration because they are fulfilling a neurotic need.	
ADOLESCENT SUICIDE	
In the age group 15 to 19, suicide is the fifth leading cause of death.	Reads and reports on the Public Health Service publication, *The Tragedy of Suicide in the United States.*
Pressures, worries, and feelings of isolation and guilt are contributing factors in suicide.	Discusses the kinds of anxieties faced by high school students that might lead to thoughts of suicide.
Suicide rarely occurs without warning. It is often planned and discussed in advance.	Discusses the early warning signs of suicide.
Major changes in the behavior of a teen-ager, accompanied by depression, isolation, and/or signs of mental illness are possible warnings of suicide.	Discusses the misconception that affluence will prevent suicide.
Individuals who attempt suicide may not be fully intent on dying. Even at the moment of decision, there may be a wish to be rescued.	Indicates what you would do if a close friend of yours was threatening to take his life.
If conditions within an individual's life change for the better, suicidal tendencies may never recur.	Participates in inviting the school psychologist to lead a class discussion about suicide in youth.

PSYCHOTIC DISORDERS

Psychoses, the most serious of mental illnesses, result in profound personality impairment; the individual is often out of touch with reality.

Psychotic behavior is not always easily recognized. Many psychotics appear normal but suddenly, without apparent warning or cause, they may demonstrate irrational behavior.

Psychoses may be classified as organic or functional. Organic psychoses are caused by physical or structural changes in the brain because of disease, such as untreated syphilis or head injury. Functional psychoses exist in individuals with apparently normal brain tissue who are unable to function adequately.

Common types of functional psychosis include schizophrenic and manic-depressive psychosis.

Schizophrenia, which is the most common of the psychoses and the most difficult to treat.

While schizophrenia is referred to as a single disorder, specialists feel that it is actually a grouping of mental disorders and that there are a number of kinds of schizophrenia.

Most cases of schizophrenia have their onset during the adolescent or early adult years.

In this disorder, there develops a general tendency toward withdrawal, feelings of unworthiness, and increased sensitivity to being rejected and unloved.

Research is needed to identify more specifically the causes and nature of this illness, as well as effective ways to treat patients.

Manic-depressive psychosis, which is characterized by severe disorders of mood, usually alternating between depression and elation.

This kind of psychosis seldom appears in adolescent years, but rather during middle age or later in life.

PREVENTION OF MENTAL ILLNESS

Prevention of mental illness includes:

Directing all efforts toward good child care

Views films, such as ***Community Mental Health.***

with the goal of providing each individual with a healthy start in life.

Making the teen-ager aware of his total health needs

Helping the adolescent to be aware of the particular stresses of the teen years—the search for identity, the need for growing independence, the change in self-concept

Assisting the adolescent to evaluate himself in relation to other teen-agers, his family, and society

Helping the adolescent think about his long-range goals and decisions.

Improving the condition of those whose lives are materially and culturally deprived.

Breaking the despair so often associated with mental illness by helping people to belong, lessening their feelings of isolation and giving them a purpose in life

Neurologists and some psychiatrists believe that at least some forms of mental illness are due more to hereditary factors than to environmental factors; social scientists and psychologists, generally, and some psychiatrists believe that environmental factors outweigh hereditary factors.

TREATMENT OF MENTAL ILLNESS

Early treatment provides the best opportunity for recovery from mental illness.

Varied approaches are used in treating mental illnesses. Treatment depends on the nature and degree of the disturbance.

Some of the more widely used techniques in treating mental illness include:

Psychotherapy, which is the basic form of treatment for the mentally ill.

This form of therapy may, in some cases, aim to relieve symptoms; in other cases the goal is the development of insights by the patients of the origin of their problems.

Discusses the importance of the following statement: The learning of how to channel hostile aggression into creative pursuits is necessary to prevent a child from becoming delinquent or criminal.

Considers the responsibilities of the individual, home, school, religious institutions, and community in preventing anti-social behavior.

Discusses the significance of the following statement made by Nicholas Johnson, a member of the Federal Communications Commission:

> **If we really want to do something about drugs, let's do something about life. Because if we make an effort to strike at the real causes of addiction to alcohol and other less prevalent and dangerous drugs, we will find that we have also made a big dent in mental illness, divorce and suicide rates, and other statistical indications of social disintegration. Let's get on with the job of giving people the physical, mental and spiritual environment they need to grow closer to their full potential. That means more money for rebuilding our cities, education, food programs, urban transportation, welfare, job training and health.**

Views films, such as *Mental Hospital.*

Psychotherapy relies largely on verbal communication between the therapist and the patient.

Group therapy, which is a form of psychotherapy in which small groups meet regularly to work through their problems.

Observes and/or participates in a peer group program at the school. Discusses how this approach may be beneficial to students.

In group therapy, individuals gain insight into their problems through interaction with the leader and also from interaction with others in the groups.

Occupational therapy, which is a form of treatment often used with patients in a hospital.

Patients learn special skills in crafts which give them a sense of accomplishment.

Play therapy, which is a form of therapy used mainly with younger children who have not yet developed verbal skills.

The children reveal their conflicts through their choice and use of different play materials.

Drug therapy, which has proven to be extremely valuable in the treatment of the mentally ill.

Some drugs have a tranquilizing effect, while others elevate the mood of depressed patients.

Drugs are administered to patients under the close supervision of a physician.

Shock therapy, which was more widely used before the introduction of drugs.

The use of electro-shock therapy causes a temporary jamming of the thought process.

Rehabilitation of Patients. Many individuals who have been mentally disturbed are left with lowered self-confidence and self-esteem.

Rehabilitation involves identifying the strengths and skills of a person recovering from a mental illness and aiding and encouraging him to do useful work.

If an individual has certain emotional or mental handicaps, he should be guided into work in which he has the optimum chance of success.

Views films, such as *Hands*.

Content	*Suggested Student Activities*
Vocational rehabilitation programs have been very valuable in returning former mentally ill patients to their communities as useful, productive citizens.	
Mental Health Specialists. Many specially trained people play important roles in helping the mentally ill to recover. They include:	
The psychiatrist, who is a medical doctor specializing in the treatment of mental and emotional disorders.	
The psychologist, who is a specialist in the study of human behavior. The clinical psychologist may also diagnose and treat individuals with emotional problems.	
The psychoanalyst, who is a specialist in the method of psychoanalysis, a technique of studying conflicts arising in the subconscious.	
The psychiatric social worker, who is a specialist in social problems associated with mental illness. He acts as a link between the psychiatrist and hospital and the patient and his family.	
The psychiatric nurse, who is a registered nurse specializing in the care of the mentally ill.	
The occupational therapist, who is a specialist in the teaching of skills as a means of rehabilitating the mentally ill.	

IMPROVED UNDERSTANDING OF MENTAL RETARDATION MAY RESULT IN SIGNIFICANT PROGRESS IN OVERCOMING THIS CONDITION

Content	*Suggested Student Activities*
Mental retardation should not be confused with mental illness.	Discusses differences between mental illness and mental retardation.
Mental retardation is a condition in which an individual, by reason of intellectual inadequacy, is incapable of performing at the level required for acceptable adjustment within his cultural environment.	Writes to President's Committee on Mental Retardation for general information relative to this condition.

Content

Every year in the United States about 126,000 infants are born who will never achieve normal mental development.

An estimated three percent of the population are mentally retarded.

There are many levels of mental retardation varying from cases in which individuals are able to perform routine tasks to those in which individuals are completely helpless.

CAUSES OF MENTAL RETARDATION

At any age, an accident to the brain, an inflammation or contagious disease, or a brain tumor, may damage the brain and cause mental retardation.

Neurological diseases, caused by biological factors, are known to account for a large percentage of the approximately six million Americans who are retarded.

Many retarded persons do not have any demonstrable damage which is recognizable at present, and the exact cause of their retardation is unknown.

PROGRESS IN MENTAL RETARDATION

Progress has recently been made in understanding and serving the mentally retarded such as:

Increased acceptance of the retarded as trainees in vocational rehabilitation programs and a rapid growth of employment opportunities.

Major advances in public awareness of the retarded and their needs through multimedia public service campaigns.

Increased growth in the numbers of volunteers serving the retarded.

Development and acceptance of medical procedures through which some causes of mental retardation may be predicted, diagnosed, and prevented.

Suggested Student Activities

Views films, such as *Introducing the Mentally Retarded.*

Reads and reports on PKU testing as a preventive measure for retardation. Presents a summary of the New York State law requiring PKU testing.

Content	*Suggested Student Activities*
Needs and problems that remain unmet include: Discovery of most mental retardation three to five years too late. Some five million of the nation's six million mentally retarded are not provided with any service specifically developed to meet their needs.	Discusses how improved social and economic conditions might prevent mental retardation.

DRUG and SUBSTANCE ABUSE
Grade 8

Generalizations

DRUGS, WHEN PROPERLY USED, ARE BENEFICIAL TO MAN.	32
DRUGS AND CHEMICAL SUBSTANCES MAY BE CLASSIFIED IN TERMS OF DERIVATION OR EFFECT.	33
THERE ARE SOCIAL, PSYCHOLOGICAL, AND ENVIRONMENTAL FACTORS RELATED TO DRUG ABUSE AND ITS PREVENTION.	40
GOVERNMENT AGENCIES HAVE SPECIFIC RESPONSIBILITIES TO REGULATE AND CONTROL THE USE OF DRUGS.	43
TREATMENT AND REHABILITATION TECHNIQUES AND PROGRAMS AIM TO HELP DRUG-DEPENDENT INDIVIDUALS BECOME DRUG FREE AND CAPABLE OF ASSUMING A RESPONSIBLE ROLE IN THE COMMUNITY.	44

Note

FIRST AID CARE IN DRUG ABUSE, page 72

GLOSSARY (on Drug Abuse), page 77

DRUGS, WHEN PROPERLY USED, ARE BENEFICIAL TO MAN

Content	*Suggested Student Activities*
Decreased incidence of disease has resulted from the development of more and better drugs.	Analyzes disease prevalence from 1900 to the present day.
Proper drug use is taking a substance for its intended purpose and in the appropriate amount, frequency, strength, and manner.	Discusses relationship of drugs to the decreased incidence of disease.
Some drugs work by destroying the disease-causing germs. Others relieve symptoms of disease, such as pain, fever, nausea, or headache.	Discusses the medical uses of the following drugs and substances: antibiotics, tranquilizers, antihistamines, vaccines, anesthetics.
Prescription drugs are those that can be purchased only with a prescription from a physician.	Participates in forming committees to speak with local pharmacists about professional training needed by persons who fill prescriptions, as well as the necessity for pharmacists to adhere to regulations and ethics in dispensing medicines.
Drug prescriptions include information concerning strength, quantity, frequency of use, name of patient, and physicians's name and registry number. Only a registered pharmacist is licensed to fill a prescription.	Indicates reason why a prescription includes each part of the information it does. Examines prescription label and indicates reasons for the information on it.
It is unlawful to sell a prescription drug if it is not prescribed by a physician.	Prepares a brief report describing rules for proper use of drugs. Sketches or magazine pictures may be used as illustrations.
A pharmacist should not be asked to refill a prescription unless it has been approved by a physician.	Discusses safety precautions for keeping drugs and medications out of the reach of very young children.
Leftover medicines should be discarded since time can change their strength and effects.	Discusses why a drug prescribed by a physician for a specific ailment should not be used for any other sickness unless a physician has specifically prescribed its use for this sickness.
Physiological and psychological differences among people may cause varying reactions (side effects) to specific substances.	Does research and makes a report on the side effects of drugs, using resource materials from government agencies, such as the Food and Drug Administration (FDA).
Proprietary drugs are those that may be sold over the counter without a prescription.	
The law requires that nonprescription drugs have directions on the label with regard to their use.	Analyzes current TV commercials which advertise proprietary drugs used for a variety of ailments such as headaches, stomach upset, colds, sleeplessness, lack of energy.
Directions for the use of a drug should be followed carefully since any drug, if it is misused, may be dangerous.	Discusses the precautions which an individual should take before using proprietary drugs.
Individuals may become dependent upon a drug if it is used on a continuing basis.	

Content	*Suggested Student Activities*
The World Health Organization has recommended the term drug dependence rather than drug addiction or drug habituation.	Discusses why the World Health Organization and other medical and psychological authorities prefer using the term drug dependence rather than drug addiction.
Drug dependence is a state of psychological and /or physical dependence following consumption of a drug on a periodic or continuing basis.	Reacts to the following statement made by a student to a newspaper reporter: Those drugs are all the same. It's not what you use but why you use it.
Drug abuse is the persistent and usually excessive self-administration of any drug which often results in psychological or physical dependence.	
Drug addiction, the common term for drug dependence, means an overwhelming craving for a substance accompanied by physical dependence which motivates continuing usage and results in physical illness when the drug is withdrawn.	

DRUGS AND CHEMICAL SUBSTANCES MAY BE CLASSIFIED IN TERMS OF DERIVATION OR EFFECT

Content	*Suggested Student Activities*
STIMULANTS	
Stimulant drugs induce sleeplessness, increase irritability of the nervous system, reduce appetite, and usually create a feeling of euphoria, a "high."	Discusses the reported use of stimulants by athletes, students, truck drivers, and business executives. Indicates why they use these drugs and what the dangers are.
Amphetamines, commonly known as "pep pills," stimulate the central nervous system, producing a feeling of general well-being.	
Amphetamines are usually swallowed in the form of capsules or tablets. Some amphetamine-type drugs can be inhaled or "snorted." They can also be injected into veins, in which case the effects are more rapid and intense.	
There are many legitimate medical uses for amphetamines, e.g., to regulate diet, to alleviate nervous disorders.	Discusses the possible outcomes of using amphetamines without medical approval.
Frequent use of amphetamines may result in a loss of judgment. Under their influence, one may attempt impossible and dangerous feats.	Discusses why it is illegal to drive a motor vehicle while a person is under the influence of stimulant drugs
Amphetamines may produce hallucinations at certain stages of intoxication or withdrawal.	

Content	*Suggested Student Activities*
The use of amphetamines does not eliminate fatigue but permits the body to use energy reserves which may suddenly be exhausted.	Discusses the benefits falsely attributed to amphetamines and why the term "pep pills" is misleading to the abuser.
Most cases of abuse originate in illegal channels where drugs are sold indiscriminately to truck drivers who want to stay awake or teen-agers and young adults looking for "kicks."	
Heavy amphetamine users often become physically debilitated and suffer from malnutrition.	
Cocaine is legally considered a hard drug and is offered for sale by the same individuals (pushers) who sell heroin.	Discusses why cocaine is grouped with narcotics or hard drugs.
Cocaine comes from the leaf of the coca plant.	
Cocaine was once used as a local anaesthetic.	
Cocaine has been replaced by synthetic compounds such as procaine. (Novocain is a trade name for procaine.)	
The user of cocaine may have hallucinations and exhibit irrational behavior.	
SEDATIVES OR DEPRESSANTS	
Sedatives or depressants ("goofballs," "sleepers," "downers") are sleep-producing or tranquilizing drugs, which, when prescribed by a physician, have medical benefit.	Reads about and reports on the medical use of sedatives and how these help in the treatment of nervous disorders.
Barbiturates function as sedatives which tend to slow down the body processes.	Participates in interviewing school physician about the comparative medical use of stimulants and sedatives.
Barbiturates are highly dangerous when taken without medical supervision. Increased doses are used to produce the desired effect, and physical dependence occurs.	Considers effects of barbiturates on the abuser's state of mind, indicating why he might be a victim of an overdose.
Withdrawal illness from barbiturates may be more serious than withdrawal from opiates.	
More people die as a result of acute intoxication from barbiturates than from any other drug poisoning.	
Taking barbiturates with or following the use of alcoholic drinks may prove to be fatal.	
Barbiturates are frequently used along with amphetamines, often to induce sleep after a "high."	

Content

The drug abuser may take barbiturates as a substitute when hard drugs are not available.

HALLUCINOGENS

Hallucinogens, mind-affecting substances, are a diverse group of drugs which cause a distortion of real images and sensations.

LSD (lysergic acid diethylamide) is a colorless, tasteless hallucinogen.

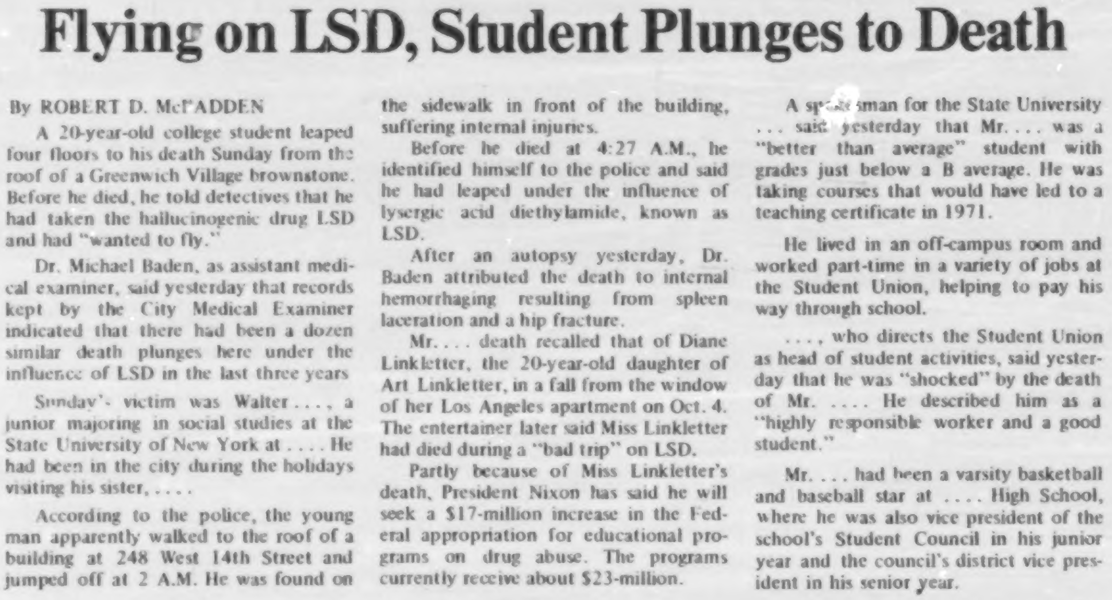
Once, doctors thought that LSD might be helpful in treating the mentally ill. At present, members of the medical profession view the drugs as valueless. It is considered dangerous because of its unpredictable effect on the user.

Suggested Student Activities

Discusses the statement: Mind-affecting substances are often referred to as psychedelic drugs. Indicates how psychedelic distortions are related to visual hallucinations.

Views films such as *LSD: Insight and Insanity.*

Discusses how young people may be influenced by publicity given to a drug.



Flying on LSD, Student Plunges to Death

By ROBERT D. McFADDEN

A 20-year-old college student leaped four floors to his death Sunday from the roof of a Greenwich Village brownstone. Before he died, he told detectives that he had taken the hallucinogenic drug LSD and had "wanted to fly."

Dr. Michael Baden, as assistant medical examiner, said yesterday that records kept by the City Medical Examiner indicated that there had been a dozen similar death plunges here under the influence of LSD in the last three years

Sunday's victim was Walter . . . , a junior majoring in social studies at the State University of New York at . . . . He had been in the city during the holidays visiting his sister, ...

According to the police, the young man apparently walked to the roof of a building at 248 West 14th Street and jumped off at 2 A.M. He was found on the sidewalk in front of the building, suffering internal injuries.

Before he died at 4:27 A.M., he identified himself to the police and said he had leaped under the influence of lysergic acid diethylamide, known as LSD.

After an autopsy yesterday, Dr. Baden attributed the death to internal hemorrhaging resulting from spleen laceration and a hip fracture.

Mr. . . . death recalled that of Diane Linkletter, the 20-year-old daughter of Art Linkletter, in a fall from the window of her Los Angeles apartment on Oct. 4. The entertainer later said Miss Linkletter had died during a "bad trip" on LSD.

Partly because of Miss Linkletter's death, President Nixon has said he will seek a $17-million increase in the Federal appropriation for educational programs on drug abuse. The programs currently receive about $23-million.

A spokesman for the State University . . . said yesterday that Mr. . . . was a "better than average" student with grades just below a B average. He was taking courses that would have led to a teaching certificate in 1971.

He lived in an off-campus room and worked part-time in a variety of jobs at the Student Union, helping to pay his way through school.

. . . , who directs the Student Union as head of student activities, said yesterday that he was "shocked" by the death of Mr. . . . . He described him as a "highly responsible worker and a good student."

Mr. . . . had been a varsity basketball and baseball star at . . . . High School, where he was also vice president of the school's Student Council in his junior year and the council's district vice president in his senior year.

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DISCUSSION QUESTIONS

1. What possible motives might this individual, "a highly responsible worker and good student," have for using LSD?
2. What effects may LSD have on an individual?
3. What arguments would you offer to counter those supporting the use of LSD?

Content

LSD may be taken in various forms. It may be combined with cubed sugar, chewing gum, and aspirin.

As little as 1/200,000 of an ounce of LSD may produce a hallucinatory experience, a "trip," lasting from eight to ten hours.

Long after LSD has been taken, the user may have a totally unexpected hallucinatory recurrence ("flashback").

The drug is considered so dangerous that public consumption of it is prohibited.

Mental hospitals have reported increasing admissions of people acutely disturbed following the use of LSD.

Other common type hallucinogens include:
- Mescaline
- Psilocybin
- DMT
- STP

MARIJUANA

Marijuana or marihuana (*Cannabis sativa*) is an intoxicating hallucinogen, which is obtained from the flowering top of Indian hemp.

Marijuana, "pot" or "grass," is usually smoked in the form of "reefers," "joints," or "sticks."

Although marijuana has been known to man for nearly 5,000 years, it is one of the least understood of all natural drugs.

Marijuana quickly enters the bloodstream and acts on the brain and nervous system.

Marijuana may cause unpredictable behavior. The user may experience feelings of excitement, depression, extreme anxiety, or fear.

Although marijuana does not cause physical dependence, many scientists believe that the drug may cause psychological dependence if users take it regularly.

Most users of marijuana do not go on to use heroin; however, a person predisposed to abuse one drug may be likely to abuse other, stronger drugs.

Suggested Student Activities

Discusses the following description of a "trip" in relation to the findings that there are unpredictable effects of LSD which can range from horror to euphoria:

> I saw the most horrible, slimy snake I have ever seen. It was large and ugly and it curled around me, starting at my ankles, slowly winding up my legs. I tried to get free but I couldn't, my legs seemed to become part of the snake . . . I knew the snake was swallowing me, bit by bit. I could feel the mucous inside the snake. I was becoming part of it. I was sick. I screamed and looked for Buddy. He seemed very far away. I thought he was laughing at me. He knew I was terrified of snakes . . . . He held out his hand and his whole arm started to twist and pulsate as if it had no bones. It was another snake. . . . The snake began to swallow my head, all wet and smooth. . . . I was the snake without eyelids, so I had to watch everything.
>
> —student, quoted in
> *The LSD Story* by John Cashman

Indicates why some young people use clearly dangerous drugs.

In cooperation with the art department, participates in a poster contest to display the hazards of experimenting with hallucinogens.

Views films, such as *Marijuana*.

Using a book, such as *Marijuana Reconsidered*, reads about and reports on the history of "pot."

Discusses the question: Can abuse of a drug such as marijuana be detrimental even though there is an absence of physical dependence on it? Why?

Discusses circumstances under which marijuana is smoked. Indicates how these conditions may influence a young person to experiment with hard drugs. Invites a former addict from an

Content	*Suggested Student Activities*
	authorized agency, such as Addiction Services Agency (ASA), to lead the discussion.
The general characteristics of the chronic marijuana user may include: Loss of interest in most things that would normally be important to people his age. Withdrawal from former companions and forming a new set of friends who use marijuana. A feeling of alienation and rebellion against authority.	Discusses how chronic marijuana use, particularly by young people, may prevent attainment of all or some of the following social or economic goals: Completing one's education Obtaining a good job Developing a satisfying relationship with friends Achieving a happy family life
The sale or possession of marijuana is prohibited by law.	Discusses implications of the following statement: Some users think that pot helps them to cope with problems. But others feel that pot doesn't solve anything because when the user returns from his high, the problems are still there and may be even larger and more discouraging than ever. Indicates why it is often said that marijuana users are "copping out."
VOLATILE CHEMICALS	
Volatile chemicals or inhalants are substances that change easily into a vapor.	Does research and reports about the physiological and psychological effects of inhaling volatile chemicals.
Among the volatile substances commonly misused are glue, paint thinner, gasoline, lighter fluid, and aerosol propellants (in spray cans).	Conducts an investigation of printed warnings on containers of certain products to determine the hazards of their misuse.
Glue-sniffers are often younger than abusers of hard drugs and are often unaware of the danger of inhalants.	Plays a role depicting a member of the family who suspects that a younger sibling has been experimenting with volatile chemicals.
Volatile chemicals are intoxicating drugs, which may cause aberrant behavior and serious damage to the body.	Prepares a poster which warns of the dangers of "sniffing."
Glue-sniffers may become dependent on the substance and show withdrawal symptoms when "sniffing" is discontinued.	Reads about and reports about aspects of the New York City Health Code (Sections 173.17 and 173.19) which deals with the use of glues and cements, using material such as that summarized in *Prevention of Narcotics Addiction and Substance Abuse* (Curriculum Bulletin No. 16, 1966-67 Series).
NARCOTICS	
Narcotics produce a state of euphoria, tranquility, drowsiness, unconsciousness, or sleep.	Does cooperative research and prepares a report with a committee of students on the historical background of opiate use.
The word narcotics refers, generally, to opium and pain-killing drugs made from opium.	

Content	*Suggested Student Activities*
Opiates are derived from opium, which is made from the juice of the opium poppy. Opium is the source of most present-day narcotics, including morphine, heroin, and codeine. **Morphine** acts directly on the central nervous system. Morphine is one of the most useful drugs in the relief of pain. Although it rarely happens, misuse of morphine in a hospital setting may cause "medical addiction."	Compares and discusses the following two statements regarding addiction: A common attitude held by teen-agers experimenting with drugs is, "Drug addiction can't happen to me." Because of the psychological or personality factors relating to drug use, no one is immune to addiction.
Heroin misuse is the most serious problem in narcotic abuse. Heroin is a white powder made from morphine. Heroin is commonly known as "H," "horse," and "junk."	Explains the following two statements: The fear of pain which goes along with giving up a drug suddenly (withdrawal symptoms) is an important reason for an addict continuing to use drugs. Heroin is always addictive.
Heroin is a source of huge profits for the underworld.	Discusses relationship between crime and heroin dependency.
Heroin is outlawed in the United States, even for medical use, because it induces strong dependency.	Lists physical symptoms that accompany withdrawal from heroin. Indicates steps doctors take in relieving pain for an individual who is giving up heroin.
Heroin use causes a strong physical dependence (addiction), that is, a need for continued use of the drug.	Discusses how doctors use methadone for people who have been addicts for a long time.
Continuous use of heroin creates a tolerance to the drug, that is, the need for repeated and larger doses to produce the same effect.	
Withdrawal symptoms are reactions suffered by an individual who stops taking a physically addictive drug, such as heroin.	Discusses how the withdrawal distress of an individual dependent on opiates compares with that of an alcoholic in need of a drink.
Withdrawal symptoms appear in the addicted person about 18 hours after the drug has been discontinued.	
The usual progression in using heroin is: "Snorting," breathing it through the nose. "Skin popping," injecting the drug beneath the skin, rather than into a vein. "Mainlining," injecting the drug directly into a vein, usually in the arm.	Discusses the physiological and/or psychological factors which affect the progression from "snorting" to "mainlining."

Boy, 12, Dies of Heroin Dose in Harlem Bathroom

A twelve-year-old boy named Walter died Sunday morning in a locked bathroom in Harlem of an overdose of heroin. According to city medical officials he was the youngest person to die from a heroin overdose. He had been taking heroin for perhaps two years.

Dr. Michael Baden, associate city medical examiner, said yesterday that the number of children and teen-agers dying from overdoses of heroin had increased as much as 300% in the last year.

Dr. Baden also stated that the neighborhood children knew Walter as a successful seller of drugs. Walter sold heroin to get enough money to support his own growing habit.

Walter, who was 12 years old on December 1, was found Sunday afternoon in the second-floor common bathroom of a house around the corner from his own home.

Equipment at His Side

Walter had entered the bathroom about midnight on Saturday. He then locked himself in to take drugs, Dr. Baden said. The police found the equipment used by heroin addicts at his side. There were two glassine envelopes of heroin. In addition the police found a syringe, a needle, and a bottle cap used to cook heroin.

The boy's body was discovered by a woman living in the building at about 4 P.M. on Sunday. She had to force the lock on the bathroom door in order to get it open. The boy was wearing a Snoopy sweatshirt. On the back of it was printed: "Watch out for me. I want to bite somebody to release my tension."

Reporters interviewed Walter's mother in the crowded four-room apartment of a friend. She said that she had not known that her son was taking drugs.

Walter's mother received $412 a month from Welfare. She had just moved a month ago to her temporary home with several of her ten children. She had been evicted from her six-room apartment for nonpayment of rent.

She had last seen Walter at 10 P.M. on Saturday, several hours before he died. At that time he had promised to bring back a Sunday newspaper. Walter was 4 feet 11 inches tall, weighed 80 pounds, and liked to wear his hair in an Afro hairdo.

Walter's mother, 45, did not report Walter missing when he did not return home on Saturday night. She thought he was staying with one of his friends.

Walter's mother said that she had seen no sign that Walter was a heroin addict. Dr. Baden reported that no marks from unclean needles were found on the boy's body. He added that it was still possible that the boy had been addicted to heroin for some time.

Dr. Baden said that Walter had been arrested before this for possession of drugs.

Walter's mother was not sure whether he had been attending school for the past two years. His father had been deported to British Guiana just after his birth.

The boy's godmother said that Walter had not attended school for a "couple of years." He had been expelled from school when he was nine years old.

She also said that Walter's mother took him to court quite some time ago. The boy had been having trouble. His mother was supposed to take him to a psychiatric clinic, but never followed through.

The boy's godmother added: "The boy was starved for attention and affection. It just got to the point where he roamed the streets."

"Like a Little Hustler"

Walter's godmother continued: "In the streets Walter found friends who introduced him to heroin. He used to hang out on the streets like a little hustler."

The eldest child of Walter's mother is 20 years old and her youngest is 4. A 19-year old son, according to Dr. Baden, is being held on Rikers Island on a narcotics charge.

About 50 children between the ages of 14 and 16 died this year from overdoses of heroin, Dr. Baden said. Last year there were no deaths of children under 15.

About 800 heroin addicts of all ages died last year from overdoses, according to Dr. Baden. More than 200 of them were 19 and under. Since last year the number of such deaths has gone up three times. Last year 72 of 700 heroin deaths were among people 19 and younger. Now that number has gone over the 200 mark.

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*Adapted for junior high school use from an article in *The New York Times,* December 16, 1969

DISCUSSION QUESTIONS

1. How did Walter get money to support his drug habit?
2. Why is there always a danger that the heroin user will take an overdose?
3. Who is responsible for the tragic death of this young boy?

Content	*Suggested Student Activities*
Unsterilized needles can spread hepatitis, tetanus, and other infections to the user.	Since tetanus, hepatitis, and overdosage are the major causes of death in narcotic users, discusses a suggestion by a physician that all addicts be immunized against tetanus and hepatitis. Indicates how such an immunization program may be carried out.
The abuser is never sure of how strong or pure a dose he is taking, and he always carries the risk of death from overdose or poisoning.	Reads "Boy, 12, Dies of Heroin Dose in Harlem Bathroom" (see page 39). Participates in a dramatization involving a scene that might have taken place in Walter's home the week before his death.
When a person becomes addicted to heroin, getting a continued supply of the drug becomes the main object of his life.	
An addict often becomes involved with crime because it costs so much to support the heroin habit.	Discusses the following question: What steps can be taken by the community to reduce the crime usually associated with addiction?
Codeine, obtained from opium, is used extensively in cough medicines and causes less dependence than heroin.	
Narcotic users will sometimes resort to taking codeine when they are deprived of their regular supply of heroin.	

THERE ARE SOCIAL, PSYCHOLOGICAL, AND ENVIRONMENTAL FACTORS RELATED TO DRUG ABUSE AND ITS PREVENTION

Content	*Suggested Student Activities*
Experimentation with drugs seems to be occurring more frequently and by increasingly younger individuals.	Justifies the contention that drug dependence is a symptom of disease.
Drug abuse can be understood, only if the causative psychological and social factors are identified.	Discusses how drug dependence differs from drug experimentation. Indicates dangers of experimenting with drugs.
Drug use may serve as a means of satisfying unfulfilled emotional needs.	
Drugs may be used to overcome fear of isolation or loneliness.	
Drug use may result from a feeling of rejection or a lack of acceptance.	
Drugs may be used when there is a lack of direction in one's way of life.	

Content	*Suggested Student Activities*
Drugs may serve to counteract a feeling of low esteem, resulting from a lack of achievement. Drugs may serve as a means of escape from people or problems. Drugs may serve as a means of rebelling against authority.	Indicates kinds of behavior that may characterize a person who uses drugs to satisfy unmet needs. Discusses how the following phrases are used to capitalize on the emotional weaknesses of young people in order to get them to try drugs: Don't be "chicken." Be "hip." Make the "scene." Don't be "square." Plays roles depicting various situations, such as: Being confronted with using drugs for fun Learning about a friend who is on drugs Refusing to use drugs when a friend makes the suggestion Coping with pressure to use drugs during social event Motiviating peer responsibility to reverse drug abuse at school
A preventive program involves the cooperative efforts of all segments of the community. Preventive programs focus on the underlying psychological and social factors of drug abuse. Organized community groups which have an interest in developing preventive programs include: Schools Parent groups (Parents Association) Clergy Mental health agencies City agencies (Addiction Services Agency) Community groups (Kiwanis, Rotarians)	Contrasts the underlying problems which foster drug abuse in large urban centers with those in more affluent communities. Uses the following factors as a basis for discussion: prejudice, slums, unemployment, substandard housing, inadequate education, value conflict with parents or other authority figures. Participates in surveying the community to assess the drug problem. Determines social conditions of the community which may be related to the drug problem. Consults with school and community leaders as a basis for outlining a proposed drug prevention program for the school and community. Uses resource persons and groups such as: a Principal, Director of Bureau for Health and Physical Education, School Narcotics Coordinators, Assistant Principal of Health and Physical Education, Guidance Department, Department of Health, State and City Narcotics Agencies, Parents Association, Student Council, Clergy, Businessmen.

Addict, 12, Found After Three Days on Drugs*

Yesterday the police found the 12-year-old daughter of a rich, East Side doctor–a psychiatrist, who treats mental illnesses and addicts–in an Upper West Side apartment building. The girl was still drugged. She ran away from home and had been on narcotics for the two days of her absence.

The girl was found dazed in the hallway of an apartment building. Her father had made a public plea to his daughter through the *Daily News* and had asked her to come home to their Upper East Side apartment.

The girl's father, a refugee from Cuba, was Castro's former Ambassador to Switzerland. On his arrival in New York he started to work in a hospital with addicts.

He explained that his daughter Isabel is an addict. She was introduced to drugs by friends in Central Park soon after her 11th birthday, he said.

The 4-foot-9-inch girl was brought home yesterday morning. She told of taking large amounts of hallucinative pills in the East Village and on the Upper West Side.

"I'm relieved she's not dead. I thought she was dead," her blond mother, Caroline, said yesterday. "But my child is only 12 and a drug addict. That's tragedy enough."

The small, brown-haired girl dropped out of her school this year because of her serious drug problem. Last night she lay on the couch in the living room of her home. She said she was still "high" from the "dozens" of pills she had swallowed Tuesday.

"Wherever I look, I see dots, and people look like pale ghosts," she said gazing wearily past her distraught mother. Also present were her calm father, a nurse hired to keep her from running away a second time, and a visitor.

"I take them–little blue pills, orange pills, green ones, pink and icy white ones–as often as I can, day and night," she went on, weaving her hands through the green fringe on her suede vest. "I take hash, pot, LSD, heroin, speed, anything I can get."

Police Seek Supplier

While the police sought Isabel, they also were looking for the man who they think heads teams of children who are narcotic peddlers throughout the city.

Policemen found out about the man early yesterday when they arrested three boys–one of them only 11 years old–as heroin peddlers.

The boys were held for a hearing in Children's Court and were charged with juvenile delinquency. The police are still looking for the adult supplier. They believe that he has other groups of youngsters selling narcotics in scattered sections of the city.

The arrest of the three boys and the finding of the girl occurred at the same time that the public has become terribly alarmed by the epidemic of drug use among children. Nearly every public and private school has held, or plans to hold, discussions with parents on the problem.

Boy Charged With Heroin Selling

Early Tuesday the police arrested the three boys–11, 13, and 15 years old–on charges of selling heroin on Mermaid Avenue in the Coney Island section of Brooklyn.

The sales territory of the boys was only ten blocks long–on the avenue between 22d and 32d Streets. The boys sold about 90 bags of heroin at $10 apiece everyday after school, the police said.

Each youngster cleared $50 daily. The adult supplier collected the receipts every two hours up to about midnight. He made about $750 a day from the three boys, according to the police.

The boys were not users and had been in the business only about three weeks, the police said.

"But people would drive up to them and make a purchase," a detective said.

---

*Adapted for junior high school use from an article in *The New York Times*, January 29, 1970

DISCUSSION QUESTIONS

1. The 12-year-old girl in this news article has all the advantages of wealth and education. Why do you think she started to take so many drugs?
2. How do you think this drug habit can affect her life?
3. If you were the judge, what action would you take in dealing with the three young sellers of heroin?

GOVERNMENT AGENCIES HAVE SPECIFIC RESPONSIBILITIES TO REGULATE AND CONTROL THE USE OF DRUGS

Content

One of the major purposes of the Food and Drug Administration (FDA) is to insure the safety and effectiveness of drugs reaching the consumer.

The FDA establishes procedures and guidelines for pharmaceutical companies who manufacture drugs for consumer use.

Drugs are tried out experimentally with animals and with humans before receiving FDA approval for general use by human beings.

Drugs on the market which are suspected of being unsafe can be recalled by the FDA.

The Bureau of Narcotics and Dangerous Drugs and the Bureau of Customs have major responsibility for the enforcement of federal drug control.

Government agents operate throughout the world to reduce drug traffic.

Federal agents cooperate with state and local agencies in the control of drug use.

The United Nations has attempted to act as a control agency for opiate drugs in world trade.

Certain legislation has aided in controlling the use of drugs.

The Federal Food, Drug, and Cosmetic Act (1906) prohibited the interstate commerce of adulterated and misbranded food and drugs.

The Harrison Narcotics Law (1914) controls the use of opium, coca leaves, and all derivatives.

The Narcotics Hospital Law (1929) recognized that addiction is not solely a criminal action but that it usually represents a symptom of an underlying personality disorder which needs treatment.

New York State's Metcalf-Volker Act (1963) gave arrested addicts the opportunity to seek voluntary commitment to a hospital and thus avoid a jail sentence.

Suggested Student Activities

Discusses the following statement made by former FDA Commissioner, James Goddard: "The FDA may provide law enforcement, but the schools must provide the educational climate to eliminate drug abuse."

Does research and makes reports on drugs which have been taken off the market by the FDA.

Explains why a drug may be recalled—since it initially had to receive FDA approval?

Prepares a report on the topic: Why drugs are difficult to control. Includes material on the following:

Law enforcement agencies involved
Cooperation of foreign countries
Penalties for illegal trafficking
Proposed legislation on all levels

Discusses the following statement: Passing laws can have a beneficial or a harmful effect, depending on the wisdom of the legislation.

Discusses why legislation should be focused on penalizing the supplier of drugs, rather than on catching the juvenile user or possessor. Indicates whether the law should differentiate between the addict pusher and the nonaddict pusher.

Interviews a representative of a law enforcement agency dealing with narcotics and a physician to find out their views on drug legislation.

Indicates guidelines that should govern drug legislation. Discusses penalties for use and sale of different kinds of drugs.

Participates in a panel discussion on the question: Should legislation dealing with marijuana be changed? Why?

Content

Drug Abuse Control Amendments (1965) gave the FDA strict control over barbiturates, amphetamines, and other dangerous drugs.

In 1966, the New York State Legislature established a law making it mandatory for every certified addict to receive treatment for a specific period of time not to exceed 36 months.

Recent major court decisions related to the area of drug abuse include:

A United States Supreme Court decision in 1962 indicated that making addiction, of itself, a crime was unconstitutional since the Court regarded addiction as an illness.

A 1969 United States Supreme Court ruling on the Dr. Timothy Leary case made key provisions of the Federal anti-marijuana laws unenforceable but still allows for severe penalties for illegal sale.

Suggested Student Activities

Participates in a committee to contact the New York State Narcotics Control Commission to determine the success of the Mental Hygiene Law of 1966.

Discusses proposed legislation which would give judges discretionary power to impose severe penalties on pushers of hard drugs while permitting them to assign lighter penalties for those convicted of marijuana possession.

TREATMENT AND REHABILITATION TECHNIQUES AND PROGRAMS AIM TO HELP DRUG-DEPENDENT INDIVIDUALS BECOME DRUG FREE AND CAPABLE OF ASSUMING ACTIVE AND RESPONSIBLE ROLES IN THE COMMUNITY

Content

The general procedure for treating and rehabilitating drug-dependent individuals includes:

Detoxification to rid the body of narcotics.

Physical build-up to restore general health.

Individual and/or group counseling.

Gradual re-entry into the community with supportive, ongoing services.

The most difficult phase of rehabilitation for the drug-dependent individual is learning to face life's responsibilities without the use of drugs.

Prospects for successful treatment are better for a young person who has a short history of drug dependence.

Suggested Student Activities

Discusses the following statement:

> If the only aim of treatment is to make the addict drug free, then it may well be a failure. However, if the aim is to rehabilitate the addict and enable him to hold a job and function in society, then the treatment may be successful.

Participates in dramatizing a situation in which a former drug addict returns to his neighborhood from a rehabilitation center. Emphasize the problem of "staying straight."

With the permission of the principal and teacher, participates in inviting a representative from the New York City Addiction Services Agency to lead a series of sensitivity training sessions for potential drug users.

Some agencies that have responsibilities in the treatment and rehabilitation of drug-dependent individuals include: the New York City Addiction Services Agency of the Health Services Administration, the New York State Narcotics Addiction Control Commission, Beth Israel Hospital, St. Luke's Hospital, Odyssey House, Phoenix House.

Participates in planning a visit to rehabilitation centers, such as Phoenix House and Odyssey House, to learn their approaches to rehabilitating addicts. After visitation, discusses and evaluates these programs.

Letters to the Editor of The Times

To the Editor:

Over three months ago The Times reported the establishment of a single residence for 35 young heroin addicts which was facing difficulties in securing a license and funds although filled to capacity.

A spokesman for the State Narcotic Addiction Control Commission was quoted as saying that very few of the 3,500 to 4,000 addicts in its care were sixteen or younger and that "The Commission had not yet seen the need to start a rehabilitation center exclusively receiving addicts that young."

The tragic fact is that heroin addiction has reached crisis proportions for children under sixteen. A survey of cases known to Manhattan Juvenile Term in September showed investigations were pending on thirty known heroin users and that 31 additional users had been placed on probation. [Editorial Jan. 19.]

One probation supervisor reported knowledge of three deaths of children under sixteen during the past six months due to overdoses of heroin.

Daily Caseload

Two years ago one case a month was unusual. Since September, while sitting in one of three parts in Juvenile Term in Manhattan, I have been confronted steadily with from two to seven cases daily of children thirteen, fourteen, and fifteen years of age involved with heroin.

These children cannot be sent to general hospitals for detoxification. Even when suffering from withdrawal symptoms, if there is no bed at Bernstein Institute, they can only be sent to the detention center.

The state narcotics centers, which are for addicts of all ages, require that children be paroled and attend their day programs voluntarily for a period before they can be accepted in residence.

When the severity of a child's problems, his lack of motivation to break the habit, or the home and neighborhood situation require placement in a residential setting, no appropriate facilities are available. State hospitals for the mentally ill take the position that drug addicts who are not psychotic do not belong in their programs. Most voluntary child care agencies will not accept youngsters with a history of drug involvement.

The only city residential facilities to which the Family Court can order placement are the state training schools. Although the State Narcotics Control Commission is also reported to be using the schools, they have no treatment programs for narcotic addicts.

How long must we wait to have the legislative and executive branches develop services for children under sixteen who need help to break heroin addiction?

JUSTINE WISE POLIER
Judge, Family Court
of the State of New York
New York, Jan. 17, 1970

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DISCUSSION QUESTIONS:

1. How do you explain the rapid increase of drug addiction among young people, sixteen and under?
2. What are the reasons given by Judge Polier for urging the creation of more residential treatment centers for children under sixteen who are drug abusers?

DRUG and SUBSTANCE ABUSE
Grade 11

Generalizations

DRUGS AND CHEMICAL SUBSTANCES MAY BE CLASSIFIED IN TERMS OF DERIVATION OR EFFECT. 48

AN UNDERSTANDING OF THE UNDERLYING SOCIAL, PSYCHOLOGICAL, AND ENVIRONMENTAL FACTORS IS THE BASIS OF A PREVENTIVE PROGRAM OF DRUG AND SUBSTANCE ABUSE. 59

GOVERNMENT AND PRIVATE AGENCIES HAVE RESPONSIBILITIES FOR TREATMENT AND REHABILITATION PROGRAMS DEALING WITH DRUG AND SUBSTANCE ABUSE. 65

Note

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GLOSSARY (on Drug Abuse), page 77

DRUGS AND CHEMICAL SUBSTANCES MAY BE CLASSIFIED IN TERMS OF DERIVATION OR EFFECT

Content	*Suggested Student Activities*
Directions for the use of a prescribed drug or a proprietary drug sold over the counter should be followed carefully since any drug, if misused, may be harmful.	Interviews local pharmacists regarding the safeguards followed in preparing medical prescriptions and reasons for listing directions on the container.
Individuals may become dependent on some drugs if they are used on a continuing basis.	
The World Health Organization recommends using the term *drug dependence* rather than drug addiction or drug habituation.	Writes on the theme: Why physicians and psychologists prefer the term *drug dependence* to the term *drug addiction*.
Drug dependence is a state of psychological and/or physical dependence arising in a person following administration of a drug on a periodic or continuing basis.	Discusses differences between psychological and physical dependence. Reacts to the statement:
Drug abuse is the persistent and usually excessive self-administration of a drug which results in psychological or physical dependence.	From the viewpoint of behavior, it does often seem that there is no such thing as a completely predictable drug effect. A psychoactive drug does different things to different people, and even to the same person, depending on external and internal circumstances.
Drug addiction refers to an overwhelming craving for a substance and is accompanied by physical dependence. It results in physical illness when the drug is withdrawn.	Does research and reports about psychological factors related to physical dependence.
Drugs that are commonly associated with drug abuse and/or drug dependence include: stimulants, sedatives or depressants, mind-affecting substances, volatile chemicals or inhalants, and narcotics.	

STIMULANTS

Content	*Suggested Student Activities*
Stimulant drugs induce sleeplessness, increase nervous irritability, reduce appetite, and usually give the user a feeling of euphoria, a "high."	Discusses implications of athletes using stimulants. Uses statements made by coaches and athletes, and in mass media as resources.
Amphetamines, commonly known as "pep pills," act with a pronounced stimulating effect on the central nervous system.	
The most common amphetamines are Benzedrine ("bennies"), Dexedrine ("dexies"), and Methedrine ("speed," "meth," or "crystal").	Prepares a chart listing commonly used amphetamines and their effects on the body.
Amphetamines are prescribed by a physician for depressed persons and to control appetite. Although amphetamines are available legally	Discusses the fact that a large group of physicians and pharmacists in Long Island recently agreed, voluntarily, to stop prescribing and dispensing amphetamines except in two medically required instances.

with a prescription, large quantities are sold on the black market.

Continuing use of amphetamines is dangerous since repeated use of the same amount of a drug results in tolerance. Hence there is a need for larger doses of the drug to get the desired effect.

Amphetamine-dependent individuals are characterized by their excitability, poor judgment, and anti-social or unpredictable behavior.

Heavy amphetamine users ("speed freaks") frequently become physically debilitated and suffer from malnutrition because of overactivity for long periods without sleep or rest.

Large doses of amphetamines may damage the liver and may also cause permanent brain damage.

Frequently the amphetamine-dependent individual uses barbiturates or opiates as a means of counteracting the effects of a stimulant.

The use of amphetamines does not eliminate fatigue; rather, it stimulates the body to release stored-up energy more rapidly than normal.

Cocaine ("snow") is legally classified as a narcotic, a hard drug, although its physiological effect is that of a stimulant.

In large doses, cocaine may produce violent stimulating and hallucinatory effects.

The common methods of taking cocaine are by "snorting" and injection. It is frequently mixed with heroin ("speed ball") to provide a more desirable high.

Reacts to the following statement by the local Narcotics Council chairman regarding the action taken by the Long Island physicians and pharmacists. "If we want to convince our children not to use drugs, then we must be prepared to set an example and show that we adults are not dependent on them for our everyday existence."

Participates in contacting the New York State Motor Vehicle Bureau and/or the Automobile Association of America to find out about laws which restrict motorists from driving while they are under the influence of stimulating drugs. Requests copies of the law as a basis for class discussion.

Indicates why physical debilitation frequently occurs among the heavy users of amphetamines.

Discusses the slogan: "Speed Kills."

Reads the following:

> At 12, Ann would get drunk on wine. A year later, she was smoking marijuana and using amphetamines. She was *drug prone*. Her parents didn't know that she was on speed. They thought she was on "dope" only when she looked drowsy, as she looked when they caught her on marijuana. At 15, she "turned on to" heroin.

Uses the following questions as a basis for discussing the preceding quotation:

What does the term *drug prone* mean?
Why do drug abusers frequently mix drugs?
What is the relationship between using amphetamines and "turning on to" heroin?

Describes how fatigue protects the body from overexertion. Indicates why the term pep pills is misleading to the abuser.

Content	*Suggested Student Activities*
There is an increased use of cocaine among drug abusers.	
Although the body does not develop tolerance, the psychological dependence associated with cocaine usage is extremely strong, making it difficult for an abuser to give up the drug.	Discusses the validity of the following statement: Cocaine is an illustration of the mistaken idea that if a drug is not physically addictive, it has no harmful effects.
Cocaine abuse leads to indifference toward health, loss of appetite, and emaciation.	
Under the proposed new penalty structure, penalties for possession or sale of cocaine are the same as those for narcotics.	
SEDATIVES OR DEPRESSANTS	
Sedatives or depressants are sleep-producing or tranquilizing drugs which, when prescribed by a physician, have medical benefit.	Reads the following statement: The pertinent question in the regular use of barbiturates is whether or not these drugs tend to obscure or worsen the condition underlying the chronic inability to sleep (insomnia), thus establishing a vicious cycle in which the patient becomes dependent on the drug.
Barbiturates ("goofballs," "sleepers," "downs," "barbs") function as sedatives which tend to slow down the body processes.	
Persons intoxicated with barbiturates may appear to be inebriated, and may be mistaken for drunks.	Analyzes and discusses the preceding statement in terms of the following questions:
In extreme cases of abuse, disorientation, aggressive behavior, and hallucinations may develop.	Under what circumstances should barbiturates be used?
Excessive barbiturate use may lead to increased tolerance, and physical and psychological dependence.	How may the indiscriminate use of barbiturates cover up the basic cause of insomnia?
The effect of abrupt cessation of barbiturate use can be extremely harmful. Withdrawal of these drugs requires medical supervision.	
Barbiturates are frequently used in combination with other drugs, mainly alcohol and/or opiates, by thrill-seekers and chronic drug abusers.	Discusses the bizarre behavior of drug abusers, sometimes called "The Hell's Angel Syndrome," which is described as follows: An individual may go on a "goofball" binge, then "turn on" with one or more of the psychedelic drugs, "fly high" with the amphetamines, "dabble" in a few "pots" of heroin, and then drink himself into a stupor with whiskey.
Combining barbiturates with other drugs is extremely hazardous since it affects the respiratory centers in the brain and may result in serious intoxication or death.	
More people die as a result of acute intoxication from barbiturates than from any other drug poisoning.	Considers such effects of barbiturates on the drug abuser as mental and emotional confusion. Indicates why the user could be a victim of an overdose.

Content

HALLUCINOGENS

Hallucinogens, mind-affecting substances, are a diverse group of drugs. A result of taking a hallucinogen is a distortion of real images and sensations.

LSD (lysergic acid diethylamide) is a hallucinogen which is colorless and tasteless.

LSD primarily affects the central nervous system, producing changes in mood and behavior.

The only legitimate supply of LSD for purposes of scientific research is available through the National Institute of Mental Health.

The LSD experience or "trip" consists of changes in perception, thought, mood, and activity.

As little as 1/200,000 of an ounce of LSD may produce a trip lasting from eight to ten hours.

Although no physical dependence appears when LSD is discontinued, there is a high degree of tolerance to this drug.

There are no withdrawal symptoms when LSD is suddenly discontinued.

The psychological effects of LSD vary considerably according to the amount taken, the personality of the user, and the circumstances under which the drug is taken.

LSD induces a state of excitation of the central nervous system manifested by changes in mood, anxiety, distortion in visual perception, and hallucinations.

Long after LSD has been taken, the user may have totally unexpected recurrences of hallucinations (flashbacks).

The danger of LSD use arises from the psychological effects of bad trips or "bummers."

Mental hospitals have reported increasing admissions of acutely disturbed people following their use of LSD.

Suggested Student Activities

Discusses the following statement: Epidemics of LSD-taking have been observed in schools when a small group has gained status by indulging in the new fad.

Plays a role depicting a situation in which a young man and his date are urged to join an LSD party. Focuses on questions such as the following:

In what manner does peer pressure show itself?

How do the role participants resist or accede to peer pressure?

Discusses feelings related to specific behavior during role playing.

Collects newspaper and magazine articles reporting behavior of individuals under the influence of LSD. Arranges for the duplication of copies for class distribution. Discusses the nature of the unpredictable behavior.

Reacts to the following statement: As might be predicted, the people who should avoid exposure to a potent mind-shaking chemical like LSD are often the very ones attracted to it. They hope, via the magic of this spectacular experience to be cured of their failings.

Discusses the "magical" elements that have been attributed to LSD. Indicates the effect its use has on the solution of personal problems.

Reacts to the following statement by Dr. Sidney Cohen relative to the relationship of LSD use to creativity: "Creativity is ninety percent perspiration and ten percent inspiration."

Discusses why suicide attempts are common among LSD users.

LSD users tend to make the drug the center of their lives.

Other less known but strong hallucinogens or psychedelic substances are peyote, mescaline, psilocybin, DMT, and STP.

Marijuana or marihuana (*Cannabis sativa*) is obtained from the flowering top of Indian hemp.

Marijuana ("pot" or "grass") is usually smoked in the form of "joints" or "sticks."

Marijuana varies greatly in strength, depending upon where it is grown and which parts of the plant go into the drug mixture.

Marijuana is sometimes adulterated with other materials, such as oregano or catnip, reducing the strength of the mixture.

Hashish ("hash") is the potent dark brown unadulterated resin collected from high quality *Cannabis sativa*. It is often five to six times stronger than the usual marijuana.

Marijuana may cause unpredictable behavior, and the user may experience feelings of excitement or depression.

Marijuana has been found to interfere with thinking processes and recent memory; it also weakens the power to concentrate and subtly retards speech.

Marijuana use may, though not necessarily, lead to experimentation with hard drugs.

Often, those who seek to condone the use of marijuana justify their position by stating that it is no more harmful than alcohol or cigarettes.

Discusses the following statement:

> Dropping out is one of the tragedies of LSD use. To do nothing but withdraw from a far from perfect society is a defeatist solution. Everyone, particularly our young people, is needed to correct the social ills of our time—to do his share in reducing injustice and intolerance. But the drug dropout avoids social responsibility.

Indicates how LSD use prevents an individual from correcting the social problems of our time.

Views films, such as *Marijuana.*

Participates in conducting research and reporting on scientific studies of marijuana. Discusses findings about its effects on the user.

Discusses the validity of the following two statements:

> Probably the most dangerous aspect of marijuana is the fact that it so often, especially among young people, leads to the use of heroin. It is possible that marijuana in some way conditions the user for heroin.
>
> It is apparently untrue that marijuana use leads to heroin. What does seem to happen is that whenever social drug-taking starts, additional drugs are likely to be tried . . . .

Discusses and evaluates the following two statements which compare alcohol and marijuana use:

> Marijuana may not be more harmful than alcohol. It has proven impossible to make alcohol illegal because it is so much a part of our culture. Marijuana is not yet a part of our culture, and to legalize it now would be irrevocable in the event research proved it dangerous.
>
> Many individuals who drink alcohol may do so moderately without any desire to become intoxicated. The marijuana user must become intoxicated to derive any satisfaction from its use.

Reacts to the following statement:

> It is an entirely different question whether an adult whose professional and family life is established and who already has a realistic pattern of functioning should use alcohol or marijuana, and whether an adolescent who still has to establish a realistic pattern for himself should smoke marijuana.

MARIJUANA[*]

Fable	Fact
Marijuana is a narcotic.	Marijuana is not a narcotic except by statute. Narcotics are opium and its derivatives (heroin, morphine, etc.) and some synthetic chemicals with opium-like activity.
Marijuana is addictive.	Marijuana does not cause physical addiction, since tolerance to its effects and unpleasant symptoms on sudden withdrawal do not occur. It can produce habituation (psychological dependence).
Marijuana causes violence and crime.	Persons under the influence of marijuana tend to be passive. It is true that sometimes a crime may be committed by a person under the influence of marijuana. The decisive factor in the committing of crimes is not necessarily marijuana or other drugs which relax one's self-control. Criminal acts spring primarily from the personality of the user.
Marijuana leads to increase in sexual activity.	Marijuana has no aphrodisiac property.
Marijuana is harmless.	Instances of acute panic, depression, and psychotic states are known, although they occur infrequently. Certain individuals can also become overly involved in marijuana use and can lose their drive. We do not know the effects of long-term use.
Occasional use of marijuana is less harmful than occasional use of alcohol.	We do not know. Research on the effects of various amounts of each drug for various periods is under way.
Marijuana use leads to heroin use.	We know of nothing in the nature of marijuana that predisposes the user to heroin abuse. It is estimated that less than 5% of chronic users of marijuana go on to heroin use.
Marijuana enhances creativity.	Marijuana use might induce fantasies which give the user an illusion of enhanced creativity. "Instant insights" reported by marijuana users are also illusory.
More severe penalties will solve the marijuana problem.	Marijuana use has increased enormously in spite of the most severely punitive laws.
It is safe to drive while one is under the influence of marijuana.	Driving under the influence of any intoxicant is hazardous.

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[*] **Extract of statement by Stanley F. Yolles, M.D., Director, National Institute of Mental Health, made before the Subcommittee on Public Health and Welfare of the Interstate and Foreign Commerce Committee on February 4, 1970.**

Content

Federal laws relating to marijuana have been revised by the Comprehensive Drug Abuse Prevention and Control Act of 1970. However, the penalties still remain heavy.

Unlike federal laws, many state laws deal with marijuana as if it were a narcotic.

An individual who depends on marijuana as a way of life, a "pothead," is often characterized by:

- Loss of interest in things that are normally important to people of the same age
- Formation of a new set of friends interested in drugs
- Secrecy and/or withdrawal
- Continual thoughts about marijuana
- Tendency toward putting things off, avoiding making decisions or accepting responsibilities
- Overt hostility toward authority

Suggested Student Activities

Conducts research and reports on legal penalties dealing with possession, use, and sale of marijuana under the Comprehensive Drug Abuse Prevention and Control Act of 1970.

Discusses current legislative efforts in New York State which aim at modifying laws on marijuana use and possession.

Debates the question: Should marijuana be legalized?

Discusses the following questions regarding a user's ability to stop smoking pot without difficulty:

- Has the drug become an essential part of the users life pattern?
- As a result of continued use of pot, has the user experienced such a personality change that there is no desire to go back to a normal way of life?

Drawing on personal information, discusses the validity of the following statement regarding the regular user or pothead:

> The long-term effects are yet to be determined, but there is a growing body of evidence that the continuing user, or pothead, becomes so involved in the process of securing and using the drug that his drive and motivation toward other activities are impaired.

Indicates how a continuing user of marijuana differs from the chronic user of drugs in general.

Translates and discusses the following well known Mexican folksong:

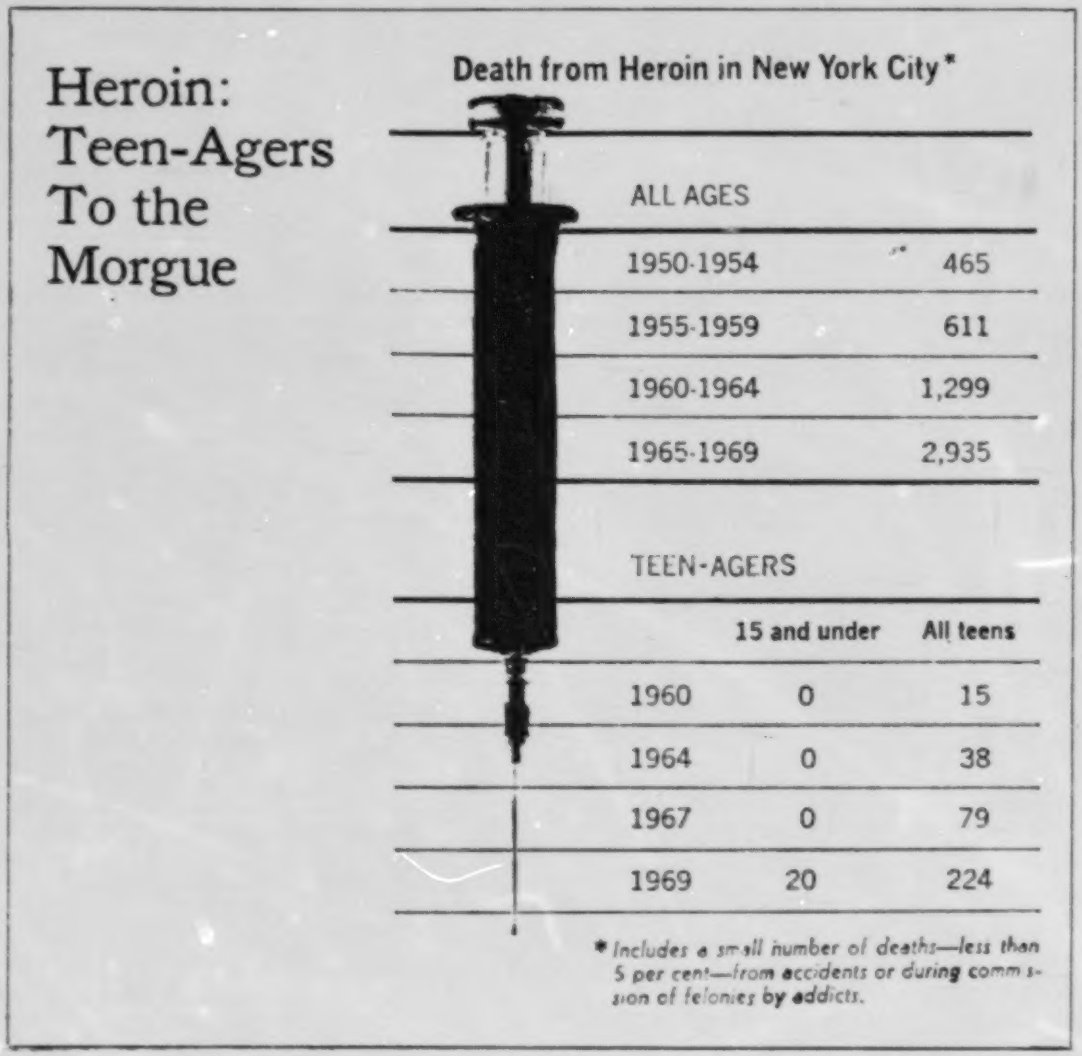
La Cucaracha

La Cucaracha, La Cucaracha,
Ya no puede caminar
Porque no tiene,
Porque le falta
Marijuana que fumar.

(Mrs. Cockroach, Mrs. Cockroach
Cannot any longer walk,
Because she hasn't,
Oh no, she hasn't,
Marijuana left to smoke.)

Content	Suggested Student Activities
VOLATILE CHEMICALS	
Volatile chemicals or inhalants are substances that change easily into a vapor.	
Among the volatile substances misused are glue, paint thinner, gasoline, and lighter fluid.	Indicates reasons why the practice of glue-sniffing is considered "kid stuff" by drug abusers.
These intoxicating substances may cause aberrant behavior and serious damage to the body.	
Sniffing has resulted in an increasing number of deaths due to acute intoxication.	Plays a role depicting a situation involving an older member of the family suspecting a younger sibling of experimenting with volatile solvents, such as airplane glue. Emphasizes alternative reactions to this situation.
Some "sniffers" have been suffocated as the plastic bag is pressed to the face; others have died attempting impossible feats.	
NARCOTICS	
Narcotic drugs produce a state of euphoria, tranquility, drowsiness, unconsciousness, or sleep.	
Opium is made from the juice of the opium poppy.	
Opium is the source of most present-day narcotics, including morphine, codeine, and heroin.	
Morphine acts directly on the central nervous system.	Explains why doctors limit the use of morphine in medicine.
Morphine is used as a pain killer by physicians.	
Because of its addictive qualities, morphine is cautiously prescribed by physicians.	
Codeine is used extensively in cough medicines and causes less dependence than heroin.	
Heroin use is the most serious problem in narcotic abuse.	Views films, such as *Seduction of the Innocent.*
Heroin is a derivative of morphine.	
Heroin is commonly known to abusers as "H," "horse," and "junk."	
Heroin causes a strong physical dependence, that is, a need for continued use of the drug.	
When the abuser becomes addicted ("hooked") to heroin, his body develops a tolerance for the drug. Hence there is a need for larger doses of the drug to get the desired effect or "kick."	Discusses the following statement: The abuser of opiates eventually ceases to get pleasure from drugs and is driven to take drugs to avoid withdrawal distress.

Content	*Suggested Student Activities*
The heroin abuser also develops a psychological dependence, a craving for the drug for emotional reasons.	Indicates how the preceding statement supports the view that at first a person takes the drug and then the drug takes the person.
Withdrawal symptoms, the physical and mental discomforts experienced on withdrawal of a drug, are experienced by heroin users.	
Withdrawal symptoms appear in the addicted person within 12 or 16 hours after the drug has been last taken and become progressively worse. After 2 or 3 days the symptoms begin to subside.	
A pregnant addict will give birth to an addicted child.	Indicates how a newborn child is affected by its mother's addiction to drugs such as heroin and why it is important to refrain from using medication unless it is prescribed by a physician.
The usual progression in the use of heroin is: Sniffing—taking drug by breathing it through the nose. Skin popping—injecting drug just underneath the skin. Mainlining—injecting drug directly into a vein.	Using the following statement as a reference, discusses the false belief held by some young people that sniffing heroin is not dangerous: Heroin, when taken through the nose, will be absorbed into the blood through the mucous membranes. Once it is in the bloodstream, heroin causes a sudden drop in respiration and can be fatal. (Refers to reprint, "Barnard Mourns a Heroin Victim," page 58.)
Addiction may occur from any of the methods of heroin abuse.	
The constant practice of "shooting" the drug into veins may cause abscesses and a breakdown of the walls of the veins.	Collects newspaper articles of reported overdose fatalities associated with heroin use. Discusses causes of these deaths. (Refers to reprint, "Heroin: Teen-Agers to the Morgue," page 57.)
Unsterilized needles can spread hepatitis, tetanus, and other infections to the user.	
Hepatitis, a liver infection, is a major cause of death among heroin users. It is transmitted from one addict to another by the common use of an unsterilized needle.	Considers the recommendation by legislators in New York City who view the heroin problem as a serious epidemic that unannounced urinalyses be given in the city's junior high and high schools to identify suspected users of heroin. Indicates the pros and cons, medically and legally, of making urinalysis mandatory in the schools for suspected users of heroin and why urinalysis should be a part of an annual school physical examination.
Tetanus is another major cause of death among heroin users. It is caused by the penetration of a needle carrying the organism into the deep tissue or muscle of the addict.	
The abuser is never sure of how strong a dose he is taking and always carries the risk of death from an overdose.	
Heroin death from an overdose is caused by a depression of respiration and a drastic lowering of blood pressure.	



Heroin: Teen-Agers To the Morgue

Death from Heroin in New York City*

ALL AGES	
1950-1954	465
1955-1959	611
1960-1964	1,299
1965-1969	2,935

TEEN-AGERS

	15 and under	All teens
1960	0	15
1964	0	38
1967	0	79
1969	20	224

* *Includes a small number of deaths—less than 5 per cent—from accidents or during commission of felonies by addicts.*

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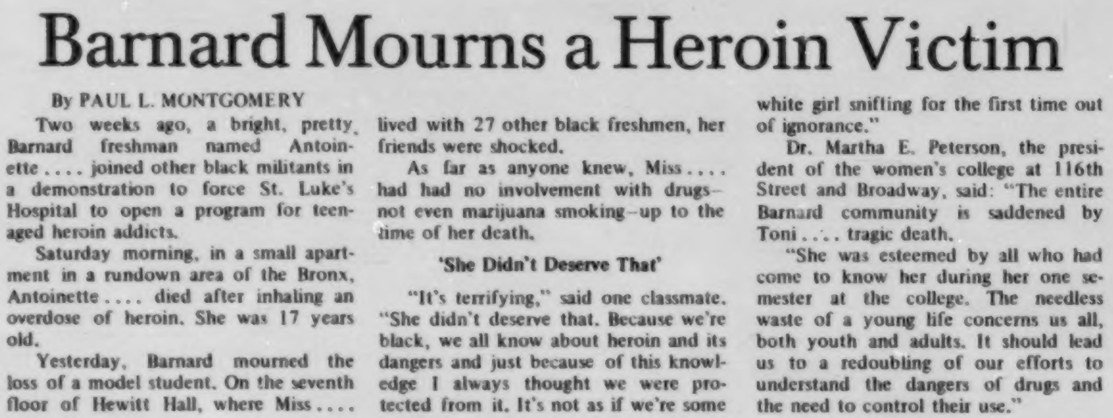
DISCUSSION QUESTIONS

1. Using chart above, at what point would you consider death from heroin to be epidemic?
2. What criteria do health officials use to determine when a disease becomes epidemic?
3. Obtain data concerning heroin deaths in other large cities, and compare these heroin death statistics with New York's.
4. Contrast these fatality figures resulting from heroin use with fatality figures based on deaths from other diseases, such as tuberculosis and venereal disease.



Barnard Mourns a Heroin Victim

By PAUL L. MONTGOMERY

Two weeks ago, a bright, pretty Barnard freshman named Antoinette . . . . joined other black militants in a demonstration to force St. Luke's Hospital to open a program for teenaged heroin addicts.

Saturday morning, in a small apartment in a rundown area of the Bronx, Antoinette . . . . died after inhaling an overdose of heroin. She was 17 years old.

Yesterday, Barnard mourned the loss of a model student. On the seventh floor of Hewitt Hall, where Miss . . . . lived with 27 other black freshmen, her friends were shocked.

As far as anyone knew, Miss . . . . had had no involvement with drugs–not even marijuana smoking–up to the time of her death.

'She Didn't Deserve That'

"It's terrifying," said one classmate. "She didn't deserve that. Because we're black, we all know about heroin and its dangers and just because of this knowledge I always thought we were protected from it. It's not as if we're some white girl sniffing for the first time out of ignorance."

Dr. Martha E. Peterson, the president of the women's college at 116th Street and Broadway, said: "The entire Barnard community is saddened by Toni . . . . tragic death.

"She was esteemed by all who had come to know her during her one semester at the college. The needless waste of a young life concerns us all, both youth and adults. It should lead us to a redoubling of our efforts to understand the dangers of drugs and the need to control their use."

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DISCUSSION QUESTIONS

1. Discuss the statement in this article: "Because we're black, we all know about heroin and its dangers and just because of this knowledge I always thought we were protected from it."
2. How valid is the position that the drug problem is getting headlines because it has spread to middle-class communities?

Content

There is no advance warning of an overdose or "hot shot." The user may lose consciousness and be dead within ten minutes.

Only prompt attention by a physician can prevent an overdose fatality.

Heroin is outlawed in the United States even for medical use because it induces strong dependence.

Heroin is a source of huge profits for the underworld.

The expense of "keeping the habit" has caused a high crime rate.

Suggested Student Activities

Does research and reports about the laws covering possession, use, and sale of narcotic drugs.

Analyzes and discusses the following statements on drugs and crime:

While many nonviolent crimes and occasional crimes of violence are committed by addicts, these crimes are committed in order to get money to buy drugs, and are not generally the direct result of any physiological action of drugs on the human organism or the human personality.

The reason New York has become a violent city in recent years, with stealing by addicts estimated at two billion dollars, is because nobody has learned how to deal with the addicts. No proposal for approaching the drug problem can be taken seriously unless it attacks the major aspect of the problem which is that heroin traffic is enormously profitable. Making the drug legal would immediately take the profit out of dealing in heroin. It might also keep the addiction rate down since no one would be interested in creating an addict if the addict were to ultimately receive his drug free.

Methadone or heroin maintenance programs would in the long run aggravate instead of alleviate drug addiction problems in the United States. While some addicts with heavy habits might restrict their criminality in

Content

Suggested Student Activities

proportion to their reduced economic needs, others would turn to criminal activity as an alternative to the emotional rewards of drug-taking. The reality is that addiction and crime are parallel activities. The same people likely to become addicts are likely to become criminals.

AN UNDERSTANDING OF THE UNDERLYING SOCIAL, PSYCHOLOGICAL, AND ENVIRONMENTAL FACTORS IS THE BASIS OF A PREVENTIVE PROGRAM OF DRUG AND SUBSTANCE ABUSE

Content

Social environmental factors related to the drug problem include peer group pressure, housing, employment, socio-economic status, health care, and education.

To provide alternatives to drug abuse, it shoud be understood that the drug means different things to different teen-age users:

Negative reaction to established values
Feeling of status
Sense of identity and self-worth
Escape from feelings of loneliness
Means of coping with actual or fantasied fears

An effective preventive program meets the special needs of various ethnic, religious, and socio-economic groups.

A preventive program should be a cooperative effort involving all segments of the community. These segments should include groups such as schools, parents, community agencies, law enforcement authorities, clergy, and business leaders.

Prevention and education programs should include:

Integration of drug-abuse teaching materials into established curriculum of the schools.

Peer self-help projects

Suggested Student Activities

Discusses why drug dependence is often regarded as a *symptom* of a societal problem.

Discusses why drug dependence, once a problem in urban areas, is now also a problem in the suburbs. Reads reprint, "Addiction Among Middle Class and Wealthy Is Found on Rise" (see page 62).

Discusses ways in which the school does and does not meet emotional and social needs of its students after questioning people from the guidance department, student government, and parents association. Draws up recommendations for overcoming the school's weaknesses after evaluation of its weaknesses and strengths.

Views films, such as *Drug Abuse: Everybody's Hang-Up.*

Discusses the following statement: It has been said that the pleasures derived from narcotics have been considerably exaggerated and that the use of drugs indicates a weakness of character rather than a proof of manliness.

Indicates why the use of drugs reveals a weakness of character.

Describes criteria for manliness for different cultural groups in our city.

Discusses the extent to which the sentiments expressed in the following poem apply to life's problems today.

Content

Adult education programs

Training programs for professionals and paraprofessionals

Storefront education centers

Suggested Student Activities

What is this I hear of sorrow and weariness
Anger, discontent, and drooping hopes?
Degenerate sons and daughters
Life is too strong for you.
It takes life to love life.

(from *Spoon River Anthology*
by Edgar Lee Masters)

Considers the following quotation:

> The kids that are into drugs, whether they are from the ghetto or the Gold Coast, are looking for the right thing—some connection with life and human value. They're just looking in the wrong place, and they find out that drugs don't work, but sometimes it's too late.

Discusses the following questions:

What is the "right thing" referred to in the quotation that our young people are searching for?

How can young people make a "connection" without harming themselves and society?

Considers the following quotation:

> We've had fads, such as the Beatles and Sinatra, but unfortunately, drug abuse is a life-threatening fad which has to be turned around. Adults have to turn themselves around as well. The children are reaping the sins of the adults—their cynicism, apathy, and lack of concern for their brothers.

Discusses the following questions:

Do you agree or disagree with the statement that drug abuse is a fad? Why?

Do you agree or disagree that adults deserve blame for the drug problem? Why?

Considers the fact that recently the Bronx District Attorney urged schools to use a provision of Article 9 of the Mental Hygiene Law of 1966, which gives anyone the right to apply for the civil commitment of a person known or suspected of being an addict. Discusses the following questions:

Should student addicts be removed from a school? Why?

How can the enforcement of this law by school authorities be justified as part of a comprehensive preventive program?

Invites the drug education specialist in school to speak about treatment and rehabilitative services available to the community.

Considers the following statement: "Parents want to put their children on an escalator. Adolescents want to walk up each step of a ladder themselves." Discusses the following questions:

What does the word escalator symbolize in the preceding statement?

Why do some parents try to use an escalator instead of a ladder?

How is an adolescent's use of drugs related to the aforementioned statement?

Considers the following statement:

> If we're to succeed in reversing the currently widespread use of drugs by young people, a change in attitude has to take place in the young themselves. Young people travel in packs, and no parent can protect his children from this banding together. Parents can't instill values in children that are opposite to those held by their peer group. We must get enough young people to start a massive, healthy, adolescent, peer-group reaction against drugs.

Discusses the following questions:

Is it true or untrue that parents can't instill values opposed to those held by peer groups? Why?

What approaches might be used to begin a youth reaction against drugs?

Addiction Among Middle Class and Wealthy Is Found on Rise

By BARBARA CAMPBELL

They are the addicts most people never think of when discussing heroin—the sons and daughters of the rich and the middle class who take their fixes in expensive apartments and suburban homes instead of slum doorways.

And their number is growing, particularly among teen-agers, according to administrators of public agencies and rehabilitation centers in New York City and the suburbs.

At the Nassau County Drug Abuse and addiction Commission at 320 Old Country Road, Garden City, L. I., for instance, the number of heroin addicts seeking help in that predominantly middle-class suburban area has increased from 202 three years ago to 989 in the first 10 months of this year.

Number Has Tripled

At Motivational Guidance, Inc., 433 West 47th Street, the number of young middle-class heroin addicts seeking help has tripled in the last two years, said the Rev. Charles Koerber, the administrative director. Right now, 72 young addicts live at the facility but Mr. Koerber said he had to turn away 100 middle-class addicts who applied last month because of a lack of space and money.

Dr. Richard Bracco, executive director of the Nassau commission, who said he expected the number of patients to exceed 1,000 by the end of the year, reported that 80 per cent of the addicts seeking treatment were from the middle class.

In Queens, the rate of increase in deaths from heroin overdoses has been described as "dramatic" by Dr. Michael Baden, associate city medical examiner.

"The majority of [narcotic] deaths," he said, "are white and from middle-class families. We never used to get doctors coming here to identify their sons' bodies."

Between 1950 and 1959, Dr. Baden added, "there were a total of 37 heroin deaths in Queens. This year alone there have been more than 50. In 1960, six persons from Queens died of overdoses, in 1963 there were 15 and in 1968 there were 37.

The average age of heroin addicts who died from overdoses has decreased, according to Dr. Baden, from 34 in 1950 to 24 today. Of the more than 800 deaths from all parts of New York so far this year, 210 of the victims were 12 to 19 years old.

There are no official statistics on the number of middle-class heroin addicts. Dr. Milton Glaser, commissioner of research at the State Narcotic Control Commission, said that many of them detoxified in private sanitariums and that some had no police files.

Protected and Sheltered

Protected by money and sheltered by relatives, the middle class heroin user is not only the least known addict, but also the least understood by bewildered parents for whom heroin seems as alien as life in the slums. The parents find it incomprehensible that a son or daughter who has been "given everything" is hooked on heroin.

"Even if I had known what my daughter was getting into and had searched her room," said the father of a 14-year-old addict now in a rehabilitation program, "I wouldn't have known what to look for. I don't know what heroin looks like."

"My son had everything going for him," said the father of a 19-year-old college student who is a heroin addict. He said he watched his son progress from barbiturates and amphetamines and finally to heroin, but could do nothing about it.

"We knew that he would have to hit the bottom before he started up," the father said.

Some parents, ashamed that their son or daughter is taking heroin, attempt to hide the fact by supplying money. Leslie, a 26-year-old fashion model, said that during the five years she and her husband were addicted to heroin, their parents gave them more than $20,000 for drugs.

Some affluent addicts, such as Eugene, 19, who lives in a 22-room house in Westchester, are able to support their habits without stealing and without the knowledge of their parents. Eugene, for example, was able to buy drugs with the ample twice-weekly allowance from his unsuspecting father, who makes more than $100,000 a year.

No one reason accounts for the growing numbers of middle-class youths who are taking heroin. The explanations include the personality of the young, the overprotectiveness of their parents and experimentation with all kinds of available drugs.

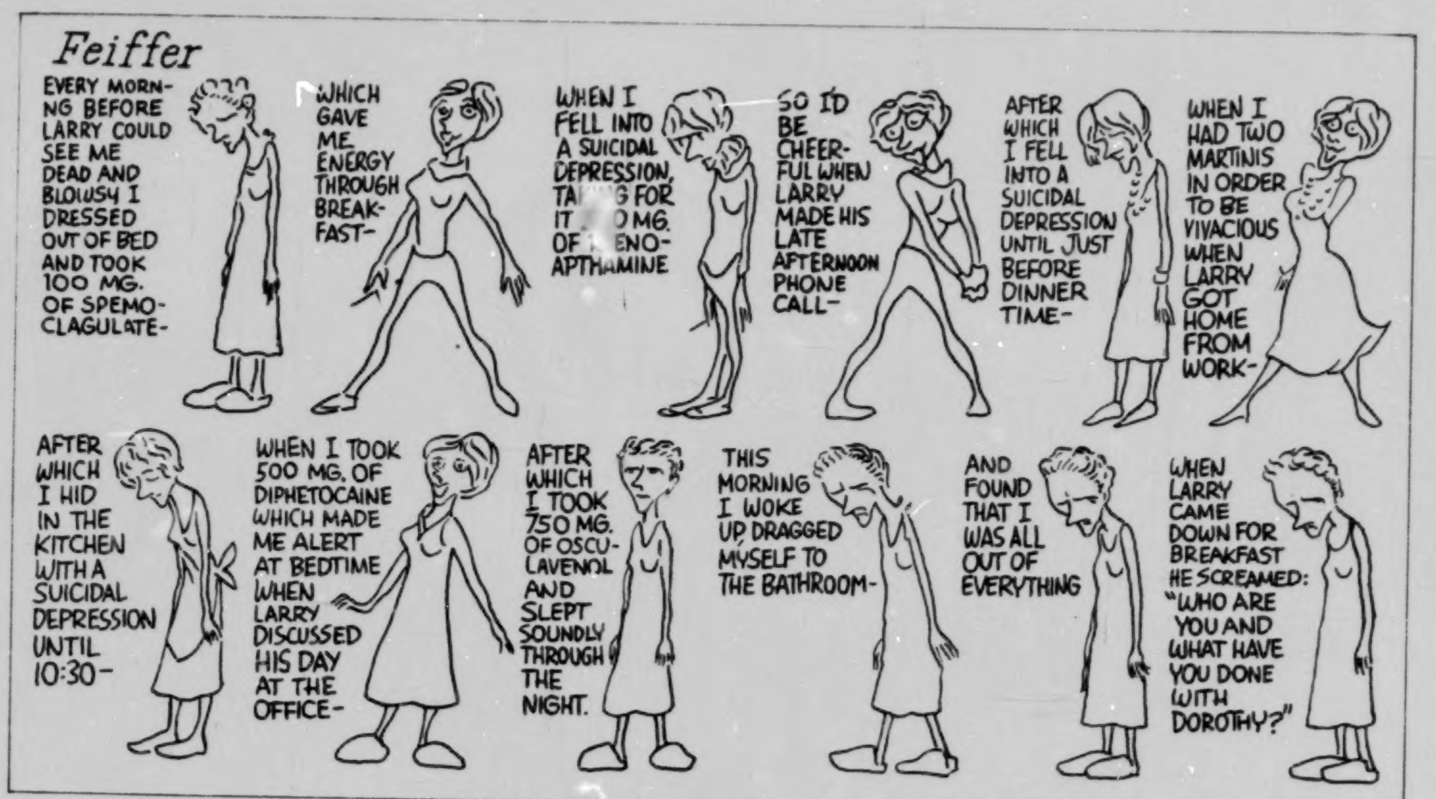
A Lower East Side marijuana pusher, who concedes that marijuana may have led some young people to heroin, said he no longer sold to them because of their indiscriminate experimentation.

"The kids are crazy," said the marijuana pusher. "They will swallow six of everything in the medicine cabinet and shoot up anything if it's given to them."

Reprinted by permission of The New York Times Company, © December 22, 1969

DISCUSSION QUESTIONS

1. What do parents mean when they say that their children have been "given everything?"
2. What might motivate a parent to supply money so that a son or daughter would be able to maintain a drug habit? What might be the consequences?
3. How valid is the statement by the pusher, "The kids are crazy. They will swallow six of everything in the medicine cabinet and shoot up anything if it's given to them."


Feiffer
EVERY MORNING BEFORE LARRY COULD SEE ME DEAD AND BLOWSY I DRESSED OUT OF BED AND TOOK 100 MG. OF SPEMOCLAGULATE-
WHICH GAVE ME ENERGY THROUGH BREAKFAST-
WHEN I FELL INTO A SUICIDAL DEPRESSION, TA[illegible]G FOR IT [illegible]0 MG. OF [illegible]ENO-APTHAMINE
SO I'D BE CHEERFUL WHEN LARRY MADE HIS LATE AFTERNOON PHONE CALL-
AFTER WHICH I FELL INTO A SUICIDAL DEPRESSION UNTIL JUST BEFORE DINNER TIME-
WHEN I HAD TWO MARTINIS IN ORDER TO BE VIVACIOUS WHEN LARRY GOT HOME FROM WORK-
AFTER WHICH I HID IN THE KITCHEN WITH A SUICIDAL DEPRESSION UNTIL 10:30-
WHEN I TOOK 500 MG. OF DIPHETOCAINE WHICH MADE ME ALERT AT BEDTIME WHEN LARRY DISCUSSED HIS DAY AT THE OFFICE-
AFTER WHICH I TOOK 750 MG. OF OSCULAVENOL AND SLEPT SOUNDLY THROUGH THE NIGHT.
THIS MORNING I WOKE UP, DRAGGED MYSELF TO THE BATHROOM-
AND FOUND THAT I WAS ALL OUT OF EVERYTHING
WHEN LARRY CAME DOWN FOR BREAKFAST HE SCREAMED: "WHO ARE YOU AND WHAT HAVE YOU DONE WITH DOROTHY?"

Reprinted from the New York Post, September 12, 1970; © Jules Feiffer; courtesy of Publishers-Hall Syndicate

DISCUSSION QUESTIONS

1. Suggest an appropriate title for this Jules Feiffer cartoon.
2. What effects do cartoons, such as this one, have on your feelings about using drugs?
3. Evaluate the communication media (TV, movies, popular songs, magazines, newspapers, etc.) in terms of their influence on drug use.

The Lost Children

Harriet Van Horne

It was about one year ago that a New York City commissioner announced that a greater effort must be made to "publicize the perils of drug addiction."

During the past week the sons and daughters of several prominent families have been at pains to oblige the commissioner. The shame, the suffering and the psychological mystery of youthful addiction have never been projected with more shattering impact. For all these young drug users come from "nice homes," and to the outward eye seem blessed with what the world regards as nice parents.

There was the 12-year-old daughter of a Cuban psychiatrist, so high on so many drugs that she couldn't remember them all. Interviewed on television, she brushed aside a strand of silky black hair and said, no, she didn't want to be cured because she really loved drugs.

The son of another psychiatrist was charged with smuggling hashish. And the sons of three political figures—the Governor of New Jersey, the city manager of Hartford and a man who'd like someday to be Governor of New York—all are parents of boys charged with illegal possession of marijuana.

* * *

Even if you grant that the laws concerning marijuana are too harsh, the question still must be faced: why this drug epidemic? Is it a breakdown of our culture or is it a failure of the parent in the child's formative years?

It is estimated that 50 percent of all college students smoke—or have smoked—marijuana. The figure is expected to rise to 70 per cent by the end of this year. In all, some 12 million Americans have used the drug.

In all studies of drug addiction and dependence (steady marijuana users are characterized as "dependents") one significant finding stands out. Most addicts are sick before they become addicted. One study of drug cases at Bellevue showed more than half the addicts to be sociopathic personalities with or without drugs. Of those using marijuana, 75 per cent gave evidence of having poor mental health—acute depression, even schizophrenia—before discovering reefers.

* * *

Social workers in Harlem have often been puzzled by the fact that two youngsters in a family will become heroin addicts while a third, subject to the same stress, the same sense of hopelessness, will not. Why?

The most convincing answer to this basic question has been made by Dr. Klaus Angel, a psychiatrist at Albert Einstein Medical College. He feels that the dependency period in some youngsters' lives was not attended by the essential degree of mother love. He compares these adolescents to toddlers, who must continually run back to mother or father for "emotional refueling." Such reassurance is vital if they are to negotiate the terrifying steps from babyhood to childhood. A child who takes drugs is, in truth, crying out, "Please help me!"

It's fashionable nowadays to blame the permissive climate of our time for the drug epidemic. Perhaps "uncaring" might be a more accurate word. Parents live in a world that's changing too fast for comfort, making them feel unsure and hopeless. Much blame is also owing the television habits of children, according to an English psychologist.

TV encourages passivity, says Dr. Derek Miller, and conveys the idea that material goods mean happiness, and happiness can be bought.

Whatever has caused the drug epidemic, it is to be hoped that the anguish of the parents now in the spotlight will stiffen the sinews of all parents.

* * *

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DISCUSSION QUESTIONS

1. Evaluate the statement, "Most addicts are sick before they become addicted."
2. "A child who takes drugs is, in truth, crying out, 'Please help me!'" What are the implications of this statement for parents and for peer groups?

GOVERNMENT AND PRIVATE AGENCIES HAVE RESPONSIBILITIES FOR TREATMENT AND REHABILITATION PROGRAMS DEALING WITH DRUG AND SUBSTANCE ABUSE

Content	*Suggested Student Activities*
Some approaches used in treating addiction include: Substituting other drugs, such as methadone Dealing with underlying psychological factors through a variety of techniques, such as group thereapy, sensitivity training, encounter sessions, and individual counseling The general procedure for treating and rehabilitating drug dependent individuals includes: Detoxifying the body by a gradual, controlled withdrawal of drugs under medical supervision in a hospital setting Restoring the general health of patient Dealing with underlying psychological factors through a variety of techniques Providing supportive services for reentry into the community	Considers the following statement: **If the only aim of treatment is to make the addict drug-free, then it may well be a failure. But if the aim is to rehabilitate the addict and enable him to hold a job and function in his community, then the treatment will be successful.** Using the preceding statement as a reference, indicates why making an addict drug-free is only a preliminary step in the treatment process. Reacts to the following statement made by a leading authority in the treatment of drug addicts: **When I began working with addicts nine years ago, I was told that addiction is an incurable disease. I no longer believe that. Instead, I am convinced that addiction can be cured because the addict's problem results from a fundamental but treatable character disorder.**
New York City Addiction Services Agency (ASA) of the Health Services Administration provides treatment and rehabilitation programs, such as: Community Orientation Center for counseling and referrals RARE, a program for relatives and friends of addicts AWARE, a program to educate the community about problems related to drugs Youth centers for children demonstrating pre-addictive behavior Attitudinal Skills Training, a group dynamic program aimed at examining and dealing with basic attitudes about oneself, about others, and about society	Plans a class trip to a local treatment center or youth center conducted by ASA to observe their programs. Indicates why it is important to encourage community involvement in drug and substance abuse programs.
Local hospitals have opened facilities for services, such as detoxification, family and housing counseling, vocational counseling, legal aid, and psychological counseling.	Evaluates the services offered at local hospitals in your communty. Outlines a program for improving and expanding such services.
Methadone maintenance is another means of treating heroin addiction:	Using a pamphlet, such as *For Your Information: A Methadone Primer*, discusses the fol-

Content	*Suggested Student Activities*
An addict is taken off heroin and stabilized on methadone in amounts which will satisfy his craving for narcotics and block the effects of heroin. After a patient is stabilized on methadone, medical supervision continues and periodic physical examinations are given to determine whether other drugs are being taken. Once patients are stabilized, they are encouraged to return to work and to engage in constructive activities. Intellectual functioning is not impaired. If individual counseling and other rehabilitation techniques bring the patient to the point where he no longer needs methadone assistance the drug may be discontinued.	lowing questions relative to the methadone maintenance program: What is the methadone program? What is the underlying philosophy governing this program? What are the short-range and long-range objectives of the program? Interviews and/or invites a representative from Beth Israel Hospital for information on the experimental treatment approach using methadone.
Research has been conducted with new drugs such as cyclazocine and naloxone, called narcotic antagonists, which neutralize the effects of heroin and other opiates. These new drugs are not themselves addictive.	Compares the benefits of narcotic antagonists with those of methadone.
New York State Narcotic Addiction Control Commission (NACC), created by law in 1966, provides a comprehensive program to: Prevent drug abuse and narcotic addiction Rehabilitate those now addicted in treatment centers Conduct research to determine the causes and effects of drug abuse Financially assist local treatment centers The National Institute of Mental Health of the United States Department of Health, Education, and Welfare offers services which include: Treatment and rehabilitation hospitals in Lexington, Kentucky, and Fort Worth, Texas Federal support for specialized training programs, and for the construction, staffing, and operation of new addiction treatment facilities Research on effects of drug use, patterns of drug usage, and on antidotes for narcotic addiction.	Considers the fact that addicts are admitted to the New York State program through the courts, when actual addiction is admitted or uncovered and proven to the judge's satisfaction. The addict is then *committed* by the court to NACC rehabilitation for up to three years. Discusses the pros and cons of compulsory and voluntary treatment of drug addicts. Reads *Why Compulsory Closed-Ward Treatment of Narcotic Addicts* (New York State Narcotic Addiction Control Commission). Reads the following statement and considers the arguments pro and con "encounter therapy" as an approach in treating drug addicts: In encounter therapy, an entering addict is exposed to open and honest analysis of his weaknesses by other addicts and former addicts. If he can face up to such analysis, work out his emotional problems, and endure the discipline—it is believed that he has a good chance of refusing drugs. Discusses the effectiveness of "encounter therapy" as a preventive approach.
Therapeutic communities, such as Phoenix House, Daytop Lodge, Odyssey House, and Synanon have approaches which include:	Discusses strengths of the approach in treating addicts described in the following: In some treatment centers, such as Phoenix House,

Content

Using former addicts who are trained in the program as leaders

Using encounter therapy as a means of confronting the addict with his own character weaknesses

Halfway houses to facilitate a gradual re-entry into the community

The British system of narcotic control allows physicians to prescribe heroin to addicts at treatment centers under government control.

The British system of treating heroin addicts is changing; these patients are now being weaned from heroin, and are being placed in a methadone maintenance program.

A comprehensive program of treatment for drug abusers should include:

A centralized referral center

Twenty-four hour "hot line" telephone emergency service

Emergency services for acute drug problems

Detoxification for opiate and barbiturate abusers

In-patient hospital treatment when needed

Drop-in centers where young people can explore the possibility of entry into a therapeutic program

Therapeutic communities or other self-help programs

Resocialization and vocational training to encourage drug abusers to acquire useful work skills

Halfway houses or other residential treatment centers

Aftercare supportive and long-term follow-up services for former in-patients.

Suggested Student Activities

entering addicts are given chores, such as running the switchboard, scrubbing the floors, washing the toilets, and cooking meals. Every new member starts at the bottom and works his way up, no matter what job he held on the outside. After completing treatment, some of the ex-addicts become staff members and are used in the rehabilitation program.

Dramatizes a situation showing why a drug addict who has received treatment at a hospital might resume his habit after returning to his neighborhood.

Writes on the theme: Why Aftercare Is So Important in the Rehabilitation of Drug Addicts.

Reviews literature describing the British system, such as *Second On-Site Study of the British Narcotic System*. Evaluates this program and its results. (Reads also the following reprints: "New Approach to Addicts in Britain," page 70, and "Should Addicts Get Free Heroin?" page 71.)

Evaluates community programs for drug-abuse treatment and makes suggestions for improving these services.

No One Answer to Drugs

There are, by official estimate, about 100,000 hardcore heroin addicts in New York City and, in addition, perhaps ten to fifteen times this number of persons with serious drug abuse or alcoholism problems. There are thousands of teen-age heroin addicts and still more who are hooked on glue-sniffing, LSD and a variety of other dangerous pills and chemicals. The problem of drug abuse among the young seems to be growing in alarming fashion as the average age of heroin addicts declines and the availability of drugs in school corridors increases. Children as young as twelve years of age are dying in this city from the use of drugs.

It is against this background that Governor Rockfeller has unveiled his program for attacking the drug problem in New York State. He has proposed that the Legislature increase by $15 million the state's methadone program. This is an utterly inadequate attack on a tremendously complex problem.

While its use as a substitute for heroin may well offer some degree of help to certain addicts, methadone has not proved successful with all heroin addicts and is, of course, itself addictive. It is not so much a cure for addiction as a far more benign form of it. To supply methadone free to heroin addicts may well relieve them of the need to rob and steal to sustain the drug habit, but it perpetuates the habit. It should be considered a last-resort help for the hopelessly hooked.

An undue emphasis on methadone, moreover, may divert attention from the basic need to attack the roots of the drug-abuse problem, which are entwined with the roots of other social problems: housing, education, health care, jobs, family instability, the whole ugly knot of problems which affect so many inner-city residents adversely. It may undermine other responses to the drug problem, such as psychiatric and other forms of therapy which sometimes rescue addicts from the grip of drugs.

* * *

Methadone can be considered no answer to the problem of drug abuse among the young. Most drug experts consider a massive educational effort beginning at the lowest age levels in school absolutely essential to prevent the spread of drug addiction. Neither Governor Rockefeller nor President Nixon nor the city of New York itself has given this sort of program sufficient attention.

New York City's Addiction Services Agency has held one—only one—seminar for a small group of schoolteachers. Spokesman for the agency consider this seminar to have been highly successful and they hope to hold more. They need funds. Teachers and school officials must be made far more alert to drug problems and more knowledgeable in handling them.

If the drug experts agree on anything, it is that there can be no one answer to the drug abuse problem and New York must not drift into a one-answer response to it. Certainly, the drug problem cannot be solved by substituting one drug for another.

It is an international problem that will take international cooperation in controlling the sources of supply, a social problem that will take some reforms across a broad range of domestic issues and, especially for the young, an educational problem where ignorance is the unscrupulous pusher's ally.

To crack down on drugs must not be to neglect the prevention of addiction. The state, along with the city and Federal levels of government, must give education about drugs a higher priority.

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DISCUSSION QUESTIONS

1. Using the opinions expressed in "No One Answer to Drugs" and the Letters to the Editor (see page 69), discuss the pros and cons of the methadone program.
2. "No One Answer to Drugs" suggests that a massive educational effort begin at the lowest age level in schools. At what grade level should such an instructional program begin? What kind of educational program should it be?

Letters to the Editor of The Times

Rehabilitating Addicts

To the Editor:

We agree with your Jan. 19 editorial on the limitations of the methadone programs.

The editorial was seriously misleading, however, in omiting any mention of the emotional disturbances which are clearly among the most important root causes of drug abuse not only among the poor, but among a rapidly increasing number of the well-to-do and their children.

Even more serious was the casual reference to "other responses to the drug problem, such as psychiatric and other forms of therapy which sometimes rescue addicts from the grip of drugs."

It seems to me that The Times should by now be aware of two well-known facts:

That the therapeutic community approach that uses no drugs, but instead an intensive course of emotional and behavioral retraining, has during the past decade in fact rescued several thousand addicts nationwide from their addictions.

That New York City now has the largest addict rehabilitation program of this kind in the country, and probably in the world: the Phoenix House program of the city's own Addiction Services Agency.*

Although it is less than three years old, the program has already grown to fourteen individual Phoenix Houses (each a self-contained therapeutic community) and is now treating almost 900 full-time residents (889 as of Jan. 14).

Of these, not so incidentally, more than 100 are under the age of 18, and 42 are 16 and under. The treatment course is estimated to last from two to three years, and 158 former addicts have already either completed the Phoenix House program or are in its final phase.

NANCY B. HOVING
New York, Jan. 21, 1970

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Methadone for Addicts

To the Editor:

The Times's Jan. 19 editorial presents a misleading and unbalanced picture of the methadone maintenance treatment for heroin addiction.

By criticizing Governor Rockefeller's excellent proposal for increased funding of this program, The Times does a distinct disservice to the people of this city, the 2,000 former heroin addicts now under treatment, the 4,500 addicts now on waiting lists and many thousand more who would apply for such treatment if it were readily available. At present an addict applying for methadone maintenance waits for about a year.

Continuing study and evaluation by an independent committee in conjunction with the Columbia School of Public Health and Administrative Medicine have established that over 80 per cent of the hard-core addicts who entered the program over a six-year period have remained in treatment, and the vast majority are restored to normal functioning in society as employed, law-abiding, tax-paying citizens.

Methadone in carefully prescribed doses eliminates the craving for heroin and blocks heroin's effects if the patient tries it. As the medication does not produce changes in tolerance levels, stabilization doses remain constant over a long period of time.

The patient when properly stabilized is neither euphoric nor sedated. His affect, perception, and neuromuscular coordination are normal. No significant long-range side effects have been noted. Heart, liver, kidney, bone marrow and endocrine tests have revealed normal values.

Addicts with serious chronic illnesses have been successfully treated when in the methadone program.

The former addict's medical dependence on methadone is a parallel to the diabetic's dependence on insulin and to the various maintenance therapies developed within the mainstream of medical practice for those afflicted with chronic illnesses and metabolic deficiencies. The disease is not cured but brought under medical control.

Methadone maintenance is a validated treatment. When knowledgeably administered it is an effective program. True, it is not a panacea, but it does have a central place in the medical treatment of narcotic drug abuse.

Indeed, we support your call for increased funding for preventive and educational programs and for continued research in all possible treatment modalities with the provision that necessary scientific evaluation procedures are also instituted.

ARTHUR C. LOGAN, M.D., ALEXANDER BEARN, M.D., KURT W. DEUSCHLE, M.D., VINCENT P. DOLE, M.D., GEORGE JAMES, M.D., RAY TRUSSELL, M.D.
New York, Jan. 19, 1970

The letter was signed by ten other physicians who also are members of the Committee for Expanded Methadone Treatment.

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*Phoenix House is no longer under ASA; it is presently a self-supporting therapeutic center.

New Approach to Addicts in Britain

By ALVIN SHUSTER

LONDON–"The real question," the doctor said after prescribing heroin for a young commercial artist, "is whether we are about to develop in this country an American-type black market in narcotics."

The doctor was speaking from a desk in a narcotics clinic in central London that is representative of the "treatment centers" the Government hopes to have in sufficient numbers in the spring when a major change takes place in the "British system" of handling addicts.

The Government has come to the conclusion that its old methods of handling the heroin addict have failed. The philosophy remains the same–a drug addict is a sick person and not a criminal and should receive the drugs he needs legally so he can continue living as near normal a life as possible.

But the way the British will dispense the drugs will change in the spring. General practitioners will no longer be permitted to prescribe heroin for an addict. He will have to refer all comers to one of the new "treatment centers" to be set up under the psychiatric departments of hospitals.

The major reason for the change is that a few doctors were prescribing too much heroin for their addict patients, giving them a surplus either to sell to others reluctant to go to the doctor or to try to "push" on the non-addicted.

The young artist, sitting in the waiting room of the clinic, put it this way:

"I used to go to a private doctor. He charged me 2 pounds ($4.80 a week) and gave me all I needed. But I decided to come here where everything was free–the doctor and the heroin.

"But some of my friends made their living from this other doctor I knew. They could get more than enough from him. Then they would sell it. They were able to sell so much they could afford another visit to the doctor, pay their rent, buy their food, and live it up in the West End night clubs."

The surplus was reasonably priced, undercutting any heroin that might be brought into Britain illicitly. The result is that the international traffic in heroin has remained virtually clear of these shores.

Even those receiving free heroin have occasionally turned to the "black market."

"I bought a couple," one young man openly admitted to the clinic doctor last week. "You haven't given me enough. It cost me a pound a grain."

The real fear here is that the new system may well break down under a flood of heroin addicts. No one really knows how many there are in this country, and the Ministry of Health may not have the facilities to handle them all when they are channeled to the treatment centers.

The doctors there will be careful in what they prescribe, and the "surplus" market will be sharply reduced. This could leave the field open for the illicit international dealers. For other addicts may prefer to remain away from the "treatment centers" and buy from illegal sources as long as their money holds out.

"The addicts are essentially shy people," a doctor said. "They may not–like change. They may regard the centers as something like a probation officer. They may not like having their name sent to the Home Office, a system that goes into effect at the end of this month. The hospital center may just seem too much like government to make them feel comfortable. The illicit market could come."

The theory behind the treatment centers is that under the guidance of specially trained doctors the addicts may be persuaded slowly to give up their heroin addiciton.

"The goal is to switch them from heroin to methadone (a narcotic without the withdrawal symptoms of heroin) to nothing," the doctor in the clinic said. "But of course that seldom works. We have had some success in switching them from heroin to the stimulant methadrine."

The Government also hopes to be able to persuade more addicts to accept hospitalization, but there is a serious question whether the hospital system will be able to handle any large numbers. For example, as of early this year, only 42 heroin addicts were being treated as in-patients in the London area. How much more space will be available for such patients remains to be seen.

Another change will be in the prescriptions themselves. Heretofore, a general practitioner merely gave an addict a prescription for a week's supply. He picked up all the heroin at the same time and was free to sell some.

Now the doctor will prescribe a week's supply of the free heroin, but he will mail it direct to the addict's pharmacist. This will prevent the addict from attempting to alter the form to obtain more heroin and enable the pharmacist to control the flow of it by dispensing it daily. It is unlikely an addict will sell his daily supply.

Officials of the Ministry of Health have come to no firm conclusion as to why Britain has experienced its rise in addiction. They say only that it is part of the "social phenomenon" being experienced in other countries, as expressed particularly in a "rebellion by youth." Most of the addicted in this country fall within the youthful category.

Many experts here believe that Britain will have to come one day to compulsory hospitalization. But for the time being the Ministry of Health wants to try its new system.

"I like this place," said an addict last week after getting his sterile hypodermic needles from a pretty nurse. "I like the doctor and the nurse. But I've got junkie friends who just wouldn't come to a place like this."

That is why the British doctors are worried.

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DISCUSSION QUESTIONS

1. Compare the British system approach to treating drug addicts with our approach.
2. Which approach is preferable? Why?

Letters to the Editor of The Times

Should Addicts Get Free Heroin

To the Editor:

The Narcotics Control Council selected by Mayor Lindsay to conduct a control study to make heroin easily available to narcotics addicts is composed of distinguished public officials. Unfortunately, not one is a physician. The medical profession views heroin addiction as an illness that is now attaining epidemic proportions. We claim the right to treat and supervise the treatment of this medical problem.

This proposed manner of handling heroin addiction has failed in Great Britain. Why not consider that country's well-conducted experiment, which resulted in failure, as a bonus for us both in money and medical efforts? The English, realizing their failure, are at present intensely interested in our own therapy with methadone and rehabilitation measures.

Perpetuating and encouraging heroin usage can only convince an addict that he is not the victim of an illness and is being led down the path of no return. Heroin therapy requires constantly increasing dosages by injection only, with all its accompanying hazards.

Our present therapeutic approach, while still not completely satisfactory, holds out more hope for success than any other treatment used in the past. Why should we revert to medieval methods, in which for years mentally ill patients were isolated—even behind bars? Education and research are being conducted now, and our present therapeutic approach can even be considered a holding operation for something more successful.

For example, Dr. Jaffe of Chicago has recently reported a successful experiment using acetyl methadone for heroin addicts. This long-acting substance permits an addict to eliminate his daily visits on weekends since the drug's effect lasts for three or four days if one dose is taken.

Representative Charles B. Rangel's objection to this free heroin program as "complete endorsement" is properly taken. Shall we now furnish free heroin to our young soldier addicts returning from Vietnam, where they found addiction on heroin a cheap form of recreation? The answer is no.

The treatment of drug addiction, as well as all other drug abuse, requires the fullest cooperation with the medical profession. We are physicians, and medical problems are what we are trained for.

PHILIP KAUFMAN, M.D.
Chairman, Drug Abuse Committee,
Queens County Medical Society

MADEL WEINSTEIN, M.D.
Chairman, Physicians Advisory
Committee on Drug Abuse
to the Queens County District Attorney
Forest Hills, N.Y., June 3, 1971

To the Editor:

I would like to take issue with the opinions of those objecting to the proposed experimental Heroin Maintenance Program on the basis of its supposed failure in England.

I am a surgeon on the staff at the Morrisania Hospital. Every Wednesday in my surgical clinic I am witness to the horrifying carnage of innocent victims, some of them in their seventies and eighties, who have been beaten or stabbed by addicts for the sake of a dollar or two.

I believe that the objectors' headlong rush to defend the interests of the addicts exhibits an unbalanced attitude and that the welfare of my clinic's patients should be the first concern of everyone. Whether the addicts maintenance dose of heroin would have to be gradually increased is entirely immaterial.

Dr. Vincent Dole may consider the program in England a failure; I consider it a success. After midnight I can walk to my house across Highbury Fields in London without the faintest qualm.

BRIAN M. H. PIDCOCK, M.D.
Bronx, June 2, 1971

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CLASS ACTIVITY

A confidential report disclosed that a city program to provide heroin to drug addicts undergoing rehabilitation was proposed to Mayor Lindsay by his Narcotics Control Council.

Using the above "Letters to the Editor of The Times" as a resource, have class debate this controversial issue.

FIRST AID CARE IN DRUG ABUSE

In cases of drug abuse emergencies, it is important that the signs and symptoms of the abuse be identified by the individual providing the immediate assistance. The type and amount of substance and the time it was taken should be determined, if possible.

It is sometimes difficult to distinguish between types of drugs taken by merely observing symptoms. This difficulty is increased when drugs are used in combination. The necessary clues to identification are often provided by apparatus such as teaspoons, paper packs, eyedroppers, hypodermic needles, vials, or collapsible tubes. The presence of gelatin capsules, pills, or drug containers, or needle marks on a victim's body is also significant and should be noted.

Information on the types of drugs taken, plus information on the age and size of the victim and his general condition and behavior should be provided to the drug abuse center or the attending physician.

MARIJUANA

Effects

The immediate physical effects of smoking one or more marijuana cigarettes include:

throat irritation
increased heart rate
reddening of the eyes
occasional dizziness, incoordination, or sleepiness
increased appetite

The psychological effects vary from individual to individual and with the amount of the drug taken. Among the effects described are feelings of exhilaration, hilarity, and conviviality, but there is distortion of time and space perception, and there may be disturbance of psychomotor activity which would impair driving and other skills.

In some individuals and with excessive use of the drug, a psychotoxic reaction resembling a bad trip on LSD may occur.

First Aid

There is no need for emergency treatment unless a psychotoxic reaction develops, and then the approach is the same as that for a bad LSD trip.

DEPRESSANTS
(Sedatives, Hypnotics)

Effects

Depressants (downers) are drugs that act upon the nervous system, promoting relaxation and sleep. Chief among these drugs are the barbiturates.

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[*] Adapted from *Drugs and Their Abuse* (New York: The American Red Cross, 1971).
See also Special Circular No. 10, 1971-72 for Board of Education Guidelines for Emergency Care Procedures.

The usual therapeutic dose of barbiturates does not relieve pain but has a calming, relaxing effect which promotes sleep. Reactions include:

- relief of anxiety and excitement
- tendency to reduce mental and physical activity
- slowness in breathing

An overdose of barbiturates produces unconsciousness, deepening to a coma, from which the victim cannot be roused. Barbiturates are frequently involved in accidental or intentional suicide.

Some accidental poisonings occur when a person becomes confused as a dose of barbiturates starts to take effect and inadvertently takes a second dose. Another cause of accidental poisoning is the increased effect that takes place when a barbiturate is taken in conjunction with alcohol. This combination can be lethal, even in small amounts.

First Aid

Maintain an open airway and give artificial respiration, if indicated.

Maintain body temperature.

Get the victim to a physician or hospital as soon as possible.

HALLUCINOGENS

(LSD, Mescaline, Psilocybin, Morning Glory Seeds)

Effects

LSD, for example, is likely to produce these physical effects:

- increased activity through its action on the central nervous system
- increased heart rate
- increased blood pressure
- increased body temperature
- dilated (enlarged) pupils
- flushed face

The psychological effects of hallucinogens, in general, are highly variable and unpredictable. They include an emergence into consciousness of previously suppressed ideas, strong emotional feeling, an impression of astonishingly lucid thought, a feeling of insight and creativity, and an intensification of sensory impressions. Changes in sensation may also be involved (sounds are seen, ordinary things appear beautiful, colors seem to be heard). A feeling of cosmic oneness and profound religious awareness, and a mood of joy and peace may also mark the use of hallucinogens.

In the bad trip, or freak-out, there is an intense experience of fear or nightmarish terror to the point of panic. Other undesirable effects are:

- complete loss of emotional control
- paranoid delusions
- hallucinations
- profound depression
- tension and anxiety

Disordered social behavior may also occur. Because of the delusions and disordered sensations, the user may think he is immune from harm or perhaps able to fly and may suffer severe physical injury. Flashbacks (sensory replay of a previous trip) are associated with the use of hallucinogenic drugs such as LSD, and such flashbacks may occur months after the drug has been taken. They may be severe, or simply a feeling of dizziness or a temporary blackout.

First Aid

The person on a trip, good or bad, needs careful attention, reassurance, and protection from bodily harm or the results of his antisocial behavior. Talk him down from his disturbing experience in quiet and safe surroundings.

Get the victim to a physician or hospital as soon as possible. Preferably, two persons should accompany him.

INHALANTS

(Glue, Paints, Gasoline, Kerosene, Lighter Fluid, Nail Polish)

Effects

The use of inhalants produces the following reactions:

- initial excitement resulting from release of inhibitions
- irritation of the respiratory passages
- unsteadiness
- drunkenness, with growing depression which deepens even to unconsciousness

The usual methods of inhaling are to hold over the nose and mouth a cloth with some of the substance on it or to cover the head with a paper or plastic bag containing a quantity of the substance.

A serious potential danger accompanies waning consciousness: failure to remove the bag from the inhaler's head may result in suffocation.

Some of the propellants in the aerosols that are inhaled are toxic to the heart and can cause death by alteration in the rhythm of the heartbeat. This situation requires prompt and intensive medical attention. Persistent use of inhalants may cause some psychic dependence and may produce pathological changes in the liver and other organs.

First Aid

If a person is found with a bag or other apparatus used with inhalants over his head, remove bag immediately.

If breathing stops, apply artificial respiration.

Obtain medical assistance immediately.

NARCOTICS

(Opium, Morphine, Codeine, Heroin, Demerol, Methadone)

Effects

An overdose of narcotics results in the following conditions:

- lethargy and increasing reduction in activity and awareness
- sleep deepening to coma (prolonged unconsciousness)
- increasing depression of breathing to the point of respiratory failure
- profuse sweating

fall in temperature
muscle relaxation
constricted pupils (except with meperidine)

First Aid

Arouse the victim, if possible, by lightly slapping him with a cold, wet towel and try to get him on his feet.

Maintain an open airway and apply artificial respiration if indicated.

Maintain body temperature.

Avoid rough treatment of the victim.

Reassure the victim and seek medical assistance as soon as possible.

STIMULANTS

(Amphetamines, Cocaine)

Effects

Stimulants (uppers) are used to increase mental activity and to offset drowsiness and fatigue.

An overdose of amphetamine may produce toxic effects when taken orally, but these effects are more common when amphetamine is taken by intravenous injection.

In recent years, a form of amphetamine abuse involving repeated intravenous injection of the drug (usually Methedrine or Dexedrine) has developed. Called a speed run, it may result in considerable risk to the individual and the people around him. The pattern of abuse begins with several days of repeated injections, which increase in size and frequency. The daily total sometimes reaches more than 100 times the initial dose. Initially, the user may feel energetic, talkative, enthusiastic, happy, and confident. He does not sleep and usually eats little or nothing. After a few days, unpleasant symptoms appear and increase as the dose increases. These symptoms include:

confusion
disorganization
compulsive repetition of small, meaningless acts
irritability
suspiciousness
fear
hallucinations and delusions which may become paranoid
aggressive and antisocial behavior which may endanger others

The run, which usually lasts less than a week, is abruptly terminated. The abuser is left exhausted. He sleeps—sometimes for several days—and on awakening, he is emotionally depressed, lethargic, and extremely hungry. Shortly, another run is begun, and the cycle is repeated. There is little that can be done for the victim except to protect him against injury and to seek psychiatric help for the delusions and hallucinations.

Abuse of cocaine may take a form similar to the speed run, with rapid repeated intravenous injections followed by psychotoxic symptoms similar to those characteristic of amphetamine, particularly delusions of a paranoid nature. Another cocaine abuse practice is the taking of the drug alternately or concurrently with heroin. In this combination, cocaine provides the up and heroin the down.

First Aid

Protect the victim against injury.

Maintain an open airway, and administer artificial respiration if indicated.

Maintain body temperature.

Obtain psychiatric help for the victim with delusions and hallucinations.

TRANQUILIZERS

Effects

Overdosage of the major tranquilizers (chlorpromazine, reserpine) produces a deepening state of unconsciousness, a fall in body temperature or blood pressure, and eventual respiratory failure. The effects produced by an overdose are prolonged, and the victim must be watched carefully as long as severe central nervous system depression persists.

The minor tranquilizers (Miltown, Librium, Valium) are used to calm anxiety and other feelings of stress and excitement without producing sleep.

First Aid

Arouse the victim, if possible, by light slapping with a cold, wet towel and by trying to get the victim on his feet.

Maintain an open airway and apply artificial respiration, if indicated.

Maintain body temperature.

Get the victim to a physician, hospital, or drug abuse treatment center as soon as possible.

GLOSSARY OF DRUG TERMS

A leading trait of the drug abuser and the drug world is their special language. What follows is a compilation of drug terms from several sources. It is not all inclusive, but it is indicative of what abusers say "on the street."

Acid: LSD
Acidhead: user of LSD
Acid party: party at which LSD is taken

Bag: a container of drugs
Bagman: a drug supplier
Bang: to inject drugs
Barbs: barbiturates
Bennies: Benzedrine
Bindle: small quantity or packet of narcotics
Biz: equipment for injecting drugs
Blanks: poor quality narcotics
Blasted: under the influence of drugs
Blow a stick: to smoke a marijuana cigarette
Blue Devils: Amytal capsules
Bombido: injectable amphetamine
Bread: money
Burned: to receive phony or badly diluted drugs
Busted: arrested

Caballo: heroin
Candy: barbiturates
Cap: a capsule of drug such as heroin or LSD
Cartwheels: amphetamine pills; "uppers"
Charged up: under the influence of drugs
Chipping: taking small amounts of drugs on an irregular basis
Clean: a person who is not in possession of drugs
Coasting: under the influence of drugs
Coke: cocaine
Cokie: a heavy abuser of cocaine
Cold turkey: sudden drug withdrawal
Connect: to purchase drugs
Connection: a drug supplier
Cooking: getting drugs ready for use
Co-pilots: amphetamine pills
Cop: to purchase drugs
Copping out: failing to meet a situation or problem honestly
Cut: the process of weakening or diluting a drug by adding milk sugar

Dabble: to take small amounts of drugs on an irregular basis
Deal: to sell drugs
Dealer: a drug supplier
Deck: a small packet of narcotics
Dexies: Dexedrine tablets
Dirge bag: a ten-dollar purchase of drugs
Dirty: term suggesting that a person has drugs on his person
Dollies: Dolophine tablets
Dope: any narcotic drug
Drop: to take a drug of some kind (to "drop" acid)

Factory: equipment for injecting drugs
Fix: an injection of narcotics
Floating: under the influence of drugs
Fly high: to be under the influence of a drug, especially marijuana
Footballs: oval-shaped amphetamine sulfate tablets
Fuzz: the police

Garbage: drugs of poor quality
Gimmicks: the equipment for injecting drugs
Goods: drugs
Goofballs: barbiturates
Grass: marijuana
Gun: a hypodermic needle

H: heroin
Hang-up: a personal problem
Happy dust: cocaine powder
Hard stuff: morphine, cocaine or heroin

Harry: heroin
Hawk: user or seller of LSD
Hay: marijuana
Herd: user of drugs
Hearts: Benzedrine or Dexedrine heart-shaped tablets
Heat: the police
Hemp: marijuana
High: under the influence of drugs
Holding: in possession of drugs (Are you "holding?")
Hooked: addicted
Hophead: narcotic addict
Hopped up: under the influence of drugs
Horse: heroin
Hot shot: a fatal dosage
Hype: narcotic addict

Joint: a marijuana cigarette
Joy-pop: not a regular user or addict
Junk: narcotics
Junkie: a narcotic addict

Kick: to abandon a drug habit
Kilo: a unit of weight equal to about 2.2 pounds; commonly used for marijuana

Lit up: under the influence of drugs

Machinery: equipment for injecting drugs
Mainline: to inject drugs directly into a vein
Make a buy: to purchase drugs
Man: the police
Manicure: to prepare marijuana for use in cigarettes (The "raw" pot is "manicured" by sorting out the parts of the plant not fit for smoking.)
Mary Jane: marijuana
Meth: methamphetamine, usually injected for rapid result
Mickey Finn: a drug (chloral hydrate) that is administered to a person, usually without his knowledge, to render him completely unconscious
Miss Emma: morphine
Mojo: narcotics
Monkey: drug habit involving physical dependence
Mor a grifa: marijuana

Needle: hypodermic syringe
Nickel bag: a five-dollar purchase of drugs
Nimby: Nembutal capsules

Off: withdrawn from drugs
On a trip: under the influence of LSD or some other hallucinogenic drug
On the nod: under the influence of drugs
On the street: out of jail
Outfit: equipment needed to prepare a drug, such as heroin, for injection; also known as a "kit"

Pad: living quarters where drugs may be taken
Paper: a prescription or packet of narcotics
Piece: a container of drugs (usually one ounce)
Pillhead: a user of barbiturate or amphetamine pills
Plant: a cache of narcotics
Pop: to inject drugs
Pot: marijuana
Pothead: an habitual user of "pot"

Quill: a folded matchbox cover from which narcotics are sniffed through the nose

Rainbows: Tuinal capsules, a strong barbiturate
Red Devils: Seconal capsules, a barbiturate
Reefer: a marijuana cigarette
Roach: the butt of a marijuana cigarette
Rope: marijuana

Scat: heroin
Score: to purchase drugs
Seggy: Seconal capsules, a barbiturate
Shooting gallery: a place where addicts inject drugs
Shoot up: to inject drugs
Sniff: to take a drug by breathing it up the nose
Snorting: using drugs by sniffing up the nose
Snow: cocaine

Speed: methamphetamine or Methedrine, usually injected for rapid result

Speed freak: a user of methamphetamine; a "freak" shows the effects of the drug by constant restless movement

Speedball: an injection which combines a stimulant and depressant; often cocaine mixed with morphine or heroin

Spike: the needle used for injecting drugs

Square: a nonaddict

Stash: a cache of narcotics

Stick: a marijuana cigarette

Strungout: heavily addicted; in bad shape as a result of continued use of drugs

Stuff: applied to drugs in general, especially to heroin and morphine

Tea: marijuana

Tooies: Tuinal capsules

Trip, Tripping: being "high" on hallucinogens, particularly LSD

Tune in: to feel the effects of LSD

Turkey: a capsule purported to be narcotic but filled with a nonnarcotic substance

Turned off: withdrawn from drugs

Turned on: under the influence of drugs

Weed: marijuana

Weed-head: marijuana user

Weekend habit: a small, irregular drug habit

Whites: amphetamines

White Stuff: morphine or heroin

Works: the equipment for injecting drugs

Yellow-jackets: Nembutal capsules

ALCOHOL: Grade 8

Generalizations

A KNOWLEDGE OF THE HISTORICAL BACKGROUND OF THE USE OF ALCOHOLIC BEVERAGES CONTRIBUTES TOWARD AN UNDERSTANDING OF CURRENT ATTITUDES ON DRINKING. 82

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THERE IS A RELATIONSHIP BETWEEN CONSUMPTION OF ALCOHOLIC BEVERAGES AND BEHAVIOR AND PERSONALITY. 85

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A KNOWLEDGE OF THE HISTORICAL BACKGROUND OF THE USE OF ALCOHOLIC BEVERAGES CONTRIBUTES TOWARD AN UNDERSTANDING OF CURRENT ATTITUDES ON DRINKING

Content	*Suggested Student Activities*
Historically, alcohol has been used in a variety of ways and for different purposes. Primitive tribes believed that alcoholic beverages had a spiritual value.	Discusses how alcohol is part of celebrating festivals, weddings, and other special occasions.
Biblical accounts indicate that wine was commonly used by Hebrews and early Christians. The alcoholic beverages consumed in the ancient civilizations of Babylon, Mexico, and Peru were made from grapes and other fruits.	Discusses the significance of the use of wine in religious ceremonies, basing information on personal experience and/or talk with parents and clergy.
History shows that people in early civilizations tried to prevent the intemperate use of alcohol.	Does research and makes a report dealing with sections of the Hammurabic Code of Law in Ancient Babylon which pertain to the use of alcoholic beverages.
The use and sale of alcoholic beverages started in the United States during the colonial period. The early settlers from England brought their drinking customs to the new land of America. By 1750, beer and rum were widely used in the colonies at social gatherings such as christenings, funerals, and political meetings.	Contrasts the social role of drinking during the colonial period with the social concept of drinking in: The depression period of the 30's World War II period of the 40's The present day
American colonists consumed rum distilled from West Indian molasses. During the colonial period, rum was a basic commodity in the West Indian and African triangular slave trade.	Does research and makes a report dealing with the use of rum in the West Indian and African triangular slave trade. Indicates how this trade influenced drinking customs during the early colonial period.
Although the moderate use of alcoholic beverages was acceptable in the colonies, excessive drinking or drunkeness was considered immoral.	Compares current attitudes toward immoderate drinking with that of the colonial period.
The temperance movement of the early 1800's favored moderation in drinking. Although wine and beer were acceptable, the leaders of the temperance movement were opposed to the drinking of stronger spirits, such as rum and whisky. The temperance movement took the religious position that any abuse of the body is sinful. The movement for prohibition, making the sale	Does research and reports on the historical development of the temperance and prohibition movements in the United States. Includes: Groups involved Reasons for establishment of these groups Relationship of the temperance movement to the prohibition movement

Content

or purchase of alcoholic beverages illegal, evolved from a belief that moderation or temperance was unsuccessful.

Early attempts at prohibition on state and local levels were unsuccessful.

The prohibitionists, led by two highly organized and influential organizations, the Women's Christian Temperance Union and the Anti-Saloon League, directed their efforts toward national action.

In 1920, Congress passed the 18th Amendment to the Constitution, forbidding the manufacture and sale of all alcoholic beverages throughout the country.

The strongest support for the prohibition amendment came from rural America.

In the cities many immigrants, accustomed to drinking beer and wine with their meals, regarded prohibition as a denial of their personal liberty.

Prohibition was repealed in 1933 by the 21st Amendment to the Constitution.

A section of the 21st Amendment made provisions for states to have their own laws regulating the use of alcoholic beverages.

Suggested Student Activities

Political influence

Success of the movements

Current status of these groups

Does research and makes a report dealing with the important aspects of the 18th Amendment. Discusses reasons for the failure of prohibition. Focuses attention on how public attitudes affect the enforcement of laws.

Compares the feelings toward prohibition in the 1920's with current attitudes about legalizing the use of marijuana.

Considers why there was strong support for prohibition in rural areas of America.

Discusses why normally law-abiding and successful citizens disregarded the prohibition law.

Compares the problems of enforcement of the prohibition law with the current problem of enforcing narcotic laws.

THE CONSUMPTION OF ALCOHOLIC BEVERAGES AFFECTS THE BODY

Content

Beverage alcohol (ethyl alcohol) is a product of fermentation, a process by which sugar from grains and fruits is converted into alcohol.

Alcoholic beverages are either nondistilled or distilled.

Nondistilled alcoholic beverages include beer and wine.

Beer is produced by the action of yeast on a mixture of grain and malt. The alcohol content is about 4½ percent.

Suggested Student Activities

Content	*Suggested Student Activities*
Wine is produced by the fermentation of fruit juices by yeast. The alcohol content ranges from 10 to 14 percent. Distilled alcoholic beverages include whisky, rum, gin, and vodka. In these the alcohol is separated from the original liquid.	
Although alcohol is high in calories it has little nutritional value.	Indicates why it is often said that excessive use of alcoholic beverages leads to poor nutrition.
Alcohol is a depressant a drug that lowers the rate of activity of an organ or of the whole body. It is not a stimulant.	Discusses reasons why some people believe that alcohol is a stimulant to the body, rather than a depressant.
Alcohol is one of the few foods simple enough to be absorbed rapidly into the blood stream.	Using a model and/or chart of the digestive system, traces the path of food indicating where absorption of food and alcohol take place.
One's general efficiency is impaired by the presence of alcohol in the brain. The functions of the brain affected first by alcohol are speech, memory, judgment, and the ability to reason. Coordination is affected and reaction time is slowed. Speech becomes thickened and slurred. The acuity of the sense organs of hearing, sight, and touch are dulled.	Finds out what percentage of alcohol in a driver's blood is accepted as evidence of his being under the influence of alcohol. Using such resources as the New York State Motor Vehicle Bureau or the American Automobile Association, finds out the number of persons convicted of drunken driving during the latest year for which figures are available.
Factors which determine the intoxicating effect of alcohol include: Amount of alcohol consumed Presence of food in the stomach Speed of drinking Choice of alcoholic beverage Size of the drinker	Indicates which of the following individuals, A or B, is more likely to become intoxicated and why. A—not having eaten, takes two drinks of whisky within a ten-minute period. B—having eaten a full meal, takes two drinks of whisky within a two-hour period.
Time seems to be the important factor in determining the recovery from excessive drinking. It is a misconception that exercise, fresh air, a cold shower, or black coffee will reduce the effects of excessive drinking.	Using the chart on page 85, determines the number of hours one should wait before driving after having had two, three, four, or five drinks.

SOME EFFECTS OF ALCOHOLIC BEVERAGES

AMOUNT OF BEVERAGE	ALCOHOL CONCENTRATION	EFFECTS	ELIMINATION TIME
1 highball (1½ oz. whisky) *or* 1 cocktail (1½ oz. whisky) *or* 3½ oz. fortified wine *or* 5½ oz. ordinary wine *or* 2 bottles (24 oz.) beer	0.03%	Slight changes in feeling	2 hours
2 highballs *or* 2 cocktails *or* 7 oz. fortified wine *or* 11 oz. ordinary wine *or* 4 bottles beer	0.06%	Increasing effects vary among individuals and in same individual at different times Feeling of warmth; mental relaxation; slight decrease of fine skills; less concern with minor irritations	4 hours
3 highballs *or* 3 cocktails *or* 10½ oz. fortified wine *or* 16½ oz. ordinary wine *or* 6 bottles beer	0.09%	Increasing effects vary among individuals and in same individual at different times Buoyancy; exaggerated emotion and behavior; talkative, noisy, or morose Impairment of fine coordination; clumsiness; slight to moderate unsteadiness in standing or walking	6 hours
4 highballs *or* 4 cocktails *or* 14 oz. fortified wine *or* 22 oz. ordinary wine *or* 8 bottles beer	0.12%		8 hours
5 highballs *or* 5 cocktails *or* 17½ oz. fortified wine *or* 27½ oz. ordinary wine	0.15%	Intoxication; unmistakable abnormality of gross bodily functions and mental faculties	10 hours

THERE IS A RELATIONSHIP BETWEEN CONSUMPTION OF ALCOHOLIC BEVERAGES AND BEHAVIOR AND PERSONALITY

Content

Teen-agers drink alcoholic beverages for one or more of a variety of reasons:

- Emulating adult models
- Response to peer pressure
- Relief of tension, frustration, feelings of inadequacy, or pressure of personal problems
- Satisfaction of curiosity
- Desire for a "high" feeling
- Belief that alcohol will sharpen mental processes
- Desire to overcome inhibitions

Suggested Student Activities

Discusses reasons why some teen-agers believe that it is necessary to drink alcoholic beverages to be popular.

Discusses ways of relieving tensions other than drinking alcoholic beverages or using drugs.

Plays roles depicting situations involving peer-pressure and drinking.

Content	*Suggested Student Activities*
Teen-agers refrain from drinking alcoholic beverages for one or more of a variety of reasons: Affirmative response to parental advice Following ethical or religious proscriptions Imitating values or behavior of significant adult Conviction that drinking interferes with health or aggravates a health condition. Fear that drinking might lead to excess Taste of liquor disagreeable	
An individual's decision to drink is based on the knowledge of the effects of alcohol as well as on personal values.	Discusses factors that young people ought to consider when making decisions about drinking.

ALCOHOLISM AFFECTS THE INDIVIDUAL, THE FAMILY, AND THE COMMUNITY

Content	*Suggested Student Activities*
Of those who consume beverage alcohol, 90% are moderate, social, and controlled drinkers.	Compares differences in drinking habits of the moderate drinker and the immoderate drinker.
Immoderate drinking or problem drinking includes both the occasionally intoxicated individual and the chronic alcoholic.	Using books such as *Society, Culture, and Drinking Patterns* by Pittman and Snyder, does research and makes report relating to drinking habits of different cultural groups. Indicates how attitudes of people in these groups affect the incidence of problem drinking in the group. Discusses reasons underlying the following statement: Anyone who takes his first drink faces the risk of becoming a problem drinker.
Alcoholism is a condition in which an individual has lost control over his alcohol intake and is unable to refrain from drinking entirely or to stop drinking before getting intoxicated.	Compares the alcoholic with the drug-dependent individual. Indicates how they are similar and how they are different.
Alcoholism often results in physical, psychological, and social harm to the drinker and/or to others in ways such as:	Discusses implications of the following statement: Contrary to popular belief, most excessive drinkers are not skid-row derelicts. More than 70 percent reside in respectable

Content	*Suggested Student Activities*
Affecting competence at work and ability to hold a job Causing short-term and long-term family problems Placing a financial burden on the family Aggravating existing emotional and social problems	neighborhoods, have a family life, and continue to perform more or less effectively in responsible jobs.
There is a significant relationship between the incidence of motor vehicle accidents and immoderate drinking. Alcoholism is recognized as a major public health problem that requires additional research of its causes and cures.	Discusses the following questions: 1. If you were a member of a firm responsible for hiring personnel, what would be your attitude about employing a person with a history of heavy drinking? 2. What suggestions and procedures would you initiate in the case of a heavy-drinking employee? Writes slogans on drinking and driving. Illustrates these slogans on posters in art classes.
Treatment is available in communities to assist the problem drinker or alcoholic. There are clinics, hospitals, and social agencies to which alcoholics and their families can turn for practical help. Alcoholics Anonymous (AA) is a private organization, whose primary purpose is to help its members solve their common problems. The only requirement for membership is a desire to stop drinking.	Participates in surveying treatment centers available to problem drinkers in the community and in inviting representatives from these centers to describe the kinds of programs available. Participates in inviting representatives from AA, Al-Anon (for spouses, relatives, and friends of alcoholics), and Alateen (for teenagers who have an alcoholic parent) to discuss their programs. Discusses state laws and regulations concerning the sale of alcoholic beverages to minors. Indicates feelings about lowering the age for drinking. Indicates agreement or disagreement with the following statement and discusses reasons: Whether an individual drinks or not is a personal matter, but how he drinks becomes a public concern if his drinking results in anti-social behavior.

ALCOHOL: Grade 11

Generalizations

A VARIETY OF INTERACTING PSYCHOLOGICAL AND SOCIOCULTURAL FACTORS INFLUENCE TEEN-AGE DRINKING. 90

THE USE OF ALCOHOL AFFECTS THE BODY AND ONE'S BEHAVIOR. 91

ALCOHOLISM AFFECTS THE INDIVIDUAL, THE FAMILY, AND THE COMMUNITY. 94

A VARIETY OF INTERACTING PSYCHOLOGICAL AND SOCIOCULTURAL FACTORS INFLUENCE TEEN-AGE DRINKING

Content	*Suggested Student Activities*
An individual's habit of drinking alcoholic beverages is related to social and environmental factors, such as age, sex, family relationships, religion, socioeconomic status, and national background. Teen-age drinking is often related to the drinking habits of parents. For the most part, initial exposure to alcoholic beverages occurs at home with the knowledge of parents. Teen-agers who drink usually come from homes where parents drink. Teen-agers who do not drink almost always have parents who are both abstainers.	Surveys other students in the school by using a questionnaire to gather information on drinking practices and attitudes towards drinking alcoholic beverages. Includes such items as: Age Sex Drinks or abstains Reasons for drinking or abstaining Type of beverage used Parent attitude regarding drinking by son or daughter Analyzes relationships among some of the aforementioned factors.
Teen-agers attribute their drinking to a strong desire to be one of the group. Many young people who drink report they are imitating adult behavior rather than expressing rebellion or hostility toward adult authority.	Discusses conflicts that might arise in the following situation and ways of handling them. Three couples gather at a friend's home to listen to records and have refreshments. One suggests that alcoholic drinks be served. Some of the group wish to drink, while others do not.
Males drink more, and more frequently, than females.	Discusses why some male teen-agers associate drinking with adult status and/or masculinity. Indicates how the mass media affect such attitudes.
The wealthy and the poor are more likely to be drinkers than those in the middle socioeconomic class. Most cultural groups have mores and customs related to the manner and extent of drinking alcoholic beverages.	Using a book, such as *Society, Culture, and Drinking Patterns* by Pittman and Snyder, reads and reports about the drinking patterns of specific cultures. Discusses why alcoholism is more of a problem in some cultures than in others.
Although alcohol advertising has an influence on teen-age drinking, most young people respond to such advertising in the context of their own beliefs and values.	Analyzes the advertising techniques of the mass media for encouraging the sale of alcoholic beverages.
Improvement in the general mental health of our population would probably bring about a reduction in the rate of problem drinking.	Discusses the following question: What are the governmental restrictions on the advertising of alcoholic beverages? What recommendations would you make for modifying these regulations?
Young people should learn to recognize their weaknesses as well as their strengths.	Assesses personal traits, identifying strengths and weaknesses. Evaluates these after talking

Content	*Suggested Student Activities*
The ability to form satisfactory relations with others is important for one's emotional health.	with friends, parents, and relatives. Indicates ways to capitalize on strengths and to minimize weaknesses.
Deriving satisfaction from academic work or athletics or creative expression is basic to healthy emotional growth.	Discusses opportunitities in school and community which provide meaningful and satisfying activities for young people
A feeling of security from affection and attention by parents, relatives, and friends enhances one's self-esteem.	
Some individuals use alcoholic beverages as a means of dealing with personal problems.	Writes about a personal upsetting situation. Describes emotional and physical effects experienced. Explains how this situation was dealt with. Assesses personal reactions.
The insecure individual may take refuge in drinking to relieve tensions and anxieties.	
As in other forms of escape, such as drug abuse, drinking is unsatisfactory because it interferes with getting at the root cause of problems.	
Individuals who drink heavily often justify their actions by using defense mechanisms, such as rationalization, projection, denial, etc.	Gives examples of how immoderate drinkers justify their drinking. Indicates how such behavior might interfere with resolution of underlying problems.
An individual who consistently drinks to avoid facing his problems runs the risk of becoming an alcoholic.	Compares underlying causes of alcoholism with those of drug addiction.
Although one cannot predict whether an individual will become alcoholic, a well-balanced person rarely does.	
An individual's decision whether or not to drink is based on experiences, knowledge of the effects of alcohol, the customs of his family and close associates, etc.	Discusses the following statement: Alcohol is neither good nor bad; there are only good and bad uses of alcohol.

THE USE OF ALCOHOL AFFECTS THE BODY AND ONE'S BEHAVIOR

Content	*Suggested Student Activities*
All alcoholic beverages act principally on the central nervous system.	Discusses the following question: Why would 12 ounces of beer have a similar effect on the brain as 1 to 1¼ ounces of distilled liquor?
All alcoholic beverages have basically the same effects on the body. The only important difference among them is the amount of alcohol they contain.	

Content	*Suggested Student Activities*
The amount of alcohol and its concentration in the blood determines the effect on behavior. (See chart on page 85.)	Discusses the following statement: The concentration of alcohol, and therefore its effect, varies with each individual. Indicates factors which might influence the effects of alcoholic beverage consumption on behavior.
Absorption and oxidation are two important phases of alcohol metabolism which determine the concentration of alcohol in the blood.	Discusses how an individual may slow the absorption rate to prevent the intoxicating effects of alcohol. Considers the fact that alcohol is inactive as long as it remains in the stomach or small intestine.
Absorption is the process by which digested foods enter the blood. Absorption of alcohol takes place in the stomach and/or small intestines.	
The absorption rate of alcohol is influenced by the amount of alcohol consumed. The greater the amount of alcohol taken, the longer the period required for absorption.	
The presence of food in the stomach and/or small intestine slows absorption because it provides additional fluid for dilution.	Compares the effects of having a drink before dinner and sipping a glass of wine with dinner.
Drinking slowly delays absorption because it prevents the concentration of alcohol from becoming significantly high.	
Oxidation is a process in which dissolved food in the blood combines with oxygen to release heat and energy.	
Alcohol is oxidized chiefly in the liver.	Discusses how a disease such as cirrhosis of the liver affects the oxidation of alcohol. Makes reference to "Cirrhosis: A Growing Threat to Life."
Each person oxidizes alcohol at his own rate.	
A large individual usually oxidizes alcohol faster than a small one.	Discusses factors that a motorist must consider in answering the question of how many drinks are safe.
Time seems to be the most important factor for recovery from excessive drinking.	
Any alcohol present in the body beyond what the liver can process continues to circulate through the blood stream, affecting the central nervous system.	Discusses validity of the slogan "If you drink, don't drive." Indicates why one may say that the question of becoming intoxicated is a race between absorption and oxidation.
Alcohol is a depressant affecting the central nervous system.	
Its most noticeable effect is on the brain, dulling the mind.	Discusses the following question: If alcohol is classified as a depressant, why does it often make people act so much livelier soon after drinking?
The first part of the brain affected is the cerebral cortex, which controls the highest intellectual functions, such as speech, memory, judgment, and the ability to reason.	

Content	*Suggested Student Activities*
As the concentration of alcohol increases, coordination is impaired, affecting voluntary movements, such as walking, running, and talking.	Discusses probable reasons for the fact tha test subjects, after consumption of alcoho almost invariably believe that their perform ance is unimpaired or even better than usua whereas objective testing demonstrates tha performance is impaired.
Reaction time, the interval it takes for the muscle to start to act after it receives a signal, is lengthened.	Discusses how lengthened reaction time make driving under the influence of alcohol hazar ous.
The negative effect of alcohol on skilled performance increases as the skill becomes more complicated.	Discusses how drinking affects an individual athletic performance. Why do coaches c school teams prohibit their players from drink ing alcoholic beverages?
Alcohol is classified as a food because it contains calories.	
Alcohol is not a suitable substitute for usual foods in a balanced diet because it lacks nutrients needed for growth and maintenance of good health.	Discusses why alcoholics are frequently ma nourished.
Although a definite relationship between alcoholic excesses and cirrhosis of the liver has not been established, this disease has been clearly related to long-term dietary deficiencies.	Reads and makes a report about diseases r lated to excessive drinking.
The feeling of warmth induced by alcohol is a false sensation, since alcohol does not increase the rate at which the body produces heat.	Discusses why it would be unwise to give a alcoholic beverage to an individual sufferin from exposure to cold.
Following a brief surface reaction of warmth, the body temperature falls.	
The infant mortality rate in alcoholic families is higher than in moderate and/or nondrinking families. This is usually related to prenatal neglect by alcoholic parents.	Discusses the following questions: If either c both parents drink excessively, are their chil ren more or less likely to be in poor health Are they likely to become problem drinkers Why?
	Discusses why miscarriages are more numerou among women who are problem drinkers tha among abstainers or moderate drinkers?
Moderate drinkers have almost the same life expectancy as abstainers, but excessive drinkers have a shorter life span than either moderate drinkers or abstainers.	Explains the factors that contribute to th shorter life expectancy of heavy drinkers.
Excessive drinkers are likely to neglect basic rules of health, especially diet. Consequently, they are susceptible to disease.	

ALCOHOLISM AFFECTS THE INDIVIDUAL, THE FAMILY, AND THE COMMUNITY

Content

Drinking in moderation means the use of alcoholic beverages in limited amounts.

Immoderate or problem drinking means the abuse of alcohol; it is drinking an excessive amount to the point where it is harmful to the individual and to others.

Since approximately one in every fourteen drinkers eventually becomes an alcoholic, it is important that anyone who uses alcoholic beverages be able to recognize the warning signs of problem drinking.

Warning signs which may indicate problem drinking include:

- Drinking to excess
- Feeling anxious when alcohol is not available
- Having blackouts, that is forgetting what had happened during a drinking spree
- Drinking secretly

Alcoholism is a chronic disease characterized by the repeated and uncontrolled use of alcoholic beverages.

Because of drinking, alcoholics cause significant damage to themselves, their families, and their communities.

Alcoholics may be characterized by their inability to stop drinking once they start, although many are able to abstain for long periods of time.

The use of alcohol often leads to alcoholism among those people who have severe emotional problems.

Alcoholism usually develops in a social climate in which drinking is an acceptable way to relieve tension and anxiety.

Alcoholics can be helped to lead normal, productive life without alcohol.

The immoderate use of alcohol is related to family problems, crime and delinquency, and automobile accidents.

Among the problems faced by a person who drinks immoderately are:

Suggested Student Activities

Compares the moderate drinker with the problem drinker. Considers reasons both give for drinking.

Discusses, from the point of view of a parent, sibling, or employer, how to deal with an individual who shows warning signs of being a problem drinker. Indicates anxieties each might have.

Discusses the implications of the following statement in terms of social and/or cultural factors:

> In 1968 the World Health Organization reported that the United States had moved ahead of France as the nation with the world's highest incidence of alcoholism. Refers to a source, such as *Society, Culture, and Drinking Patterns* by Pittman and Snyder.

Using a play, such as *The Subject Was Roses* by F.D. Gilroy, discusses kinds of problems that might arise when a member of a family is an alcoholic.

Indicates why the American Medical Association characterizes alcoholism as a chronic disease. Refers to *The Disease Concept of Alcoholism* by E.M. Jellinek.

Discusses the following:

> The alcoholic finds that a drink brings comfort; the effect wears off and the drinker is in agony; then another drink gives new relief. The pain of not drinking is so bad that he drinks again to relieve it.

Compares alcoholism with narcotic addiction.

Discusses why it is that most drinkers are able to stop drinking when they want to, while a few drinkers, those who are alcoholics, cannot. Considers possible biological, psychological, and sociological factors which may predispose one to alcoholism.

Reacts to the following phrase: "Once an alcoholic, always an alcoholic."

Of the following problems related to the immoderate use of alcohol, discusses which causes the greatest harm and indicates why.

- Effects of alcohol on the body
- Property damage

Content	*Suggested Student Activities*
Loss of job Hindrance to promotion in employment Drain on family budget by expenditures on liquor Alienation of friends Inability to assume many of the role functions of a parent.	Harm to family and friends Harm to the community
More alcoholics and excessive drinkers are involved in crime and delinquency than are moderate drinkers.	Discusses why the immoderate use of alcohol is closely associated with crimes of violence.
A high correlation exists between the incidence of motor vehicle accidents and intoxication.	
Main goals for the treatment of alcoholism follow: To help the alcoholic recognize and accept the need for treatment To assist the alcoholic in his effort to stop drinking completely To make it possible for the alcoholic to function effectively at his job, within his family, and in the community.	Discusses the significance of the following: No one treatment program is effective for everyone. Treatment must be individualized. Reacts to the following statement: Too often hospitals treat the ailments associated with alcoholism, but do not treat alcoholism itself.
Alcoholics Anonymous (AA) has had an important impact on programs for problem drinkers. AA stresses that alcoholism is a disease in which the individual is no longer able to control his drinking. There is a strong spiritual quality to the AA philosophy. It places emphasis on moral values, personal reform, and mutual aid. The apparent effectiveness of AA has helped to counteract the belief that problem drinkers cannot overcome their drinking difficulties. AA reaches only a small number of problem drinkers in any community.	Participates in contacting a speaker from AA to talk about its program for problem drinkers and to lead a discussion of questions such as the following: At what age can one become alcoholic? Can one become an alcoholic after drinking for only two years? Can one become an alcoholic from drinking beer or wine? Can one become an alcoholic if one gets sick when drinking too much? Can one become an alcoholic if one drinks only on weekends? Can one become an alcoholic if grades are satisfactory and one hasn't been in any real trouble? (For discussion, refers to AA pamphlet, *Young People and AA.*)
Al-Anon consists of family groups which offer mutual support and discuss ways of dealing with problems related to alcoholism within the family. Alateen is for adolescent children of AA members who meet to gain an understanding of the illness and of how alcohol affects the body. Community agencies increasingly recognize the need for providing additional professional services for the problem drinker.	Considers the following statement: Husbands, wives, children, and others close to an alcoholic can assist him in accepting the fact that he is in need of help.

Who Drinks and Why

At last it looks as though scientists are accumulating sufficient data to begin programs to prevent alcoholism, a disease that has trapped, by conservative estimate, four million Americans. They are beginning to tease out the causes of alcohol addiction and, perhaps, of other drug addiction as well.

The latest addendum to the growing mass of information comes from the largest study ever made of American drinking practices, a study of 2,746 adult Americans who were picked at random and interviewed by the George Washington University team of Dr. Don Cahalan, Dr. Ira H. Cisin and Miss Helen M. Crossley. The columns of statistics included in their "American Drinking Practices," published last week by the Rutgers Center for Alcohol Studies, yield glimmers of the reasons for the start of drinking and for the growth of heavy drinking.

Taken together with the laboratory evidence on alcohol dependency, these findings help provide a total picture of the alcohol problem. As with almost all other ills, knowledge of causes usually leads if not to cure, then to prevention.

Many scientists are beginning to see drinking–whether a lot or a little–as a learned behavior that is more dependent on environment than on the conflicts of the psyche. They suggest that dependency on alcohol occurs in the same manner as one trains a dog to do a trick–through reward and punishment.

As many scientists now view the process, drinking becomes an accepted idea to a person who is born into or brought up in a milieu in which it is a common practice among the people close to him. Thus the current study shows that the heaviest drinkers–those who drink every day and who have at least five drinks on a number of occasions–come from families where the parents drank frequently or from ethnic groups, such as the Irish, religious groups, such as the Catholics or places (big cities) where heavy drinking is prevalent.

Then somewhere along the line, the drinker discovers that alcohol relieves his unhappy feelings. The drink then becomes a rewarding experience, and each drink reinforces the act of drinking as a pleasurable experience. Animal experiments show that the most strongly formed habits are those in which the behavior is its own reward. Thus the drink is a reward for the act of the drink.

As the years go on, the drinker's body needs more alcohol to get the same rewarding experience.

The physical dependency upon alcohol that produces the withdrawal symptoms in an alcoholic who attempts to abstain comes into play only after the drinking habit is firmly entrenched. But the physical addiction need not be present for one to form a strong dependency on alcohol or any other drug, a mistake made by marijuana enthusiasts who point to an absence of withdrawal symptoms after smoking marijuana as evidence that it is not "habit forming."

While the heavy drinker may drink to relieve his unhappy feelings, it is not emotional problems alone, or inadequate personality, or any other maladjustments that have been identified with alcoholism that are sufficient to account for the addiction. Many persons with severe psychic problems do not turn to alcohol or drugs.

It is with those in whom the learned habit of drinking combines psychic maladjustment who are most susceptible to alcohol addiction. The current study gives strong evidence for that. The scientists identified a group of escape drinkers, individuals who said they drank to relieve tension, to forget their worries, to change their moods, to relax or all of these.

Almost a third of all drinkers rated two or more of those reasons for drinking as very important, and a third of those were also heavy drinkers. It is among these that the scientists believe they will find the future alcoholics and those who get into trouble over alcohol.

Indeed, a follow-up study of 1,300 of the original 2,746–not yet published in its entirety–showed that the heavy escape drinkers did get into alcohol problems three years after they said they had no problems. Further, if their environment included many drinkers or they had high positive feelings toward drinking ("Drinking does more good than harm," "I enjoy getting drunk once in a while") they were even more likely to get into trouble.

The questions of the original survey and the follow-up provide a kind of short test that would enable scientists to detect high risk groups in the population: i.e., those likely to get into trouble with alcohol.

Doctors who are prone to study the alcoholic in his diseased state could not have discovered such evidence in the pre-alcoholic state since they never saw it, or never knew when they saw it. The George Washington Group now sees the first steps leading to alcoholism; they are seeing the pre-alcoholic personality; they see the ingredients of heavy drinking; and perhaps they are also shaping methods of prevention.

–EARL UBELL

Mr. Ubell is science editor for WCBS-TV News.

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DISCUSSION QUESTIONS

1. What is your reaction to the statement: "Many scientists are beginning to see drinking–whether a lot or a little–as a learned behavior that is more dependent on environment than on conflict of the psyche."
2. Why is it important to detect the high risk groups in the population; i.e., those who are likely to get into trouble with alcohol?
3. Which factor is a more significant danger sign of alcoholism, the frequency of drinking or the reasons for drinking? Why?
4. What information does "Who Drinks and Why" provide on the prevention of alcoholism?

Therapeutic approaches for alcoholism include individual psychotherapy which focuses on underlying psychological factors, and group therapy which emphasizes the social aspects in the therapeutic process.

Treatment services for alcoholics should include:

- Hospital care for problem drinkers on an equal basis with other sick people
- Additional facilities such as recovery homes or halfway houses
- Industry and trade unions should provide programs for the detection, referral, and treatment of problem drinkers.

Discusses why the following commonly used approaches are generally unsuccessful:

- Hide the liquor or pour it down the sink.
- When sober, make an appeal such as: "If you loved your family, you wouldn't get drunk so often."
- Threaten to leave home unless the alcoholic stops drinking.
- Say firmly: "You can stop drinking if you use your will power."

Interviews a representative from a group such as the Advisory Council on Alcoholism to Health Services Administration, and makes a report about the extent of public health programs related to alcoholism.

Discusses the fact that currently, problem drinkers are often treated as second-class citizens in medical facilities. Indicates probable reasons for this attitude toward alcoholism. Indicates personal reactions to such treatment of problem drinkers.

Discusses the following: Why industry and labor unions should be particularly concerned with problem drinkers.

TO FIND THE PROBLEM DRINKER

A study released last week on American drinking habits gives a portrait of the American drinker which may help in detecting the danger signs of Alcoholism and preventing it. This is the drinking pattern:

ABSTAINERS 32%

INFREQUENT DRINKERS 15%
Drink less than once a month.

LIGHT DRINKERS 28%
Drink at least once a month, but typically only one or two drinks on a single occasion.

MODERATE DRINKERS 13%
Drink at least once a month, typically several times, but usually with no more than three or four drinks per occasion.

HEAVY DRINKERS 12%
Drink nearly every day, with five or more per occasion at least once in a while, or about once weekly with usually five or more per occasion.

National Survey Finds:

Alcoholism More Widespread Than Estimated

There may be as many as nine million adult Americans who are alcoholics, with many millions more on the verge of having a serious drinking problem, according to a recent survey by researchers at George Washington University.

This figure is about one-third higher than previous estimates of the size of the alcoholism problem. A few months ago, Dr. Roger O. Egeberg, Assistant Secretary for Health, Education and Welfare described alcoholism as the nation's number one health problem, affecting 6.5 million Americans.

Alcoholism costs American industry more than $2-billion a year and has been found to be a causal factor in fully half the nation's traffic fatalities. Yet, studies show, only a relative handful of alcoholics ever receive appropriate professional attention for their illness.

Part of the problem, experts in the field told a meeting here this week, is that the physicians who are most likely to see patients who are alcoholics are often ill-equipped by their training and orientation to recognize and deal with a drinking problem.

The experts proposed that the education of every medical student include comprehensive training in the diagnosis and treatment of alcoholism.

Rarity for Students

"It's rare that the medical student even sees an alcoholic patient," said Dr. Jack Mendelson, psychiatrist and chief of the National Center for Prevention and Control of Alcoholism at the National Institute of Mental Health.

"The medical student gets bits and pieces of topical areas that might relate to alcoholism, such as the pharmacological effects of alcohol on the central nervous system, but he's rarely presented with a coherent lecture in which all phases of alcohol-related disorders are discussed," Dr. Mendelson said.

The psychiatrist was one of several physicians who addressed the first medical sessions ever held by the National Council on Alcoholism, a health organization with affiliates in major cities throughout the country that are devoted to combating alcoholism through medical, labor-management and information programs.

Dr. William R. Willard, dean of the University of Kentucky College of Medicine, said in an address to a luncheon meeting that if a medical school dealt with alcoholism as a clinical entity at all, it was usually done in the psychiatry department. "But," he added, "it is the internist and general practitioner who see most of the alcoholic patients."

Alcoholism is a complex, chronic illness that is not well understood, in part, several experts at the meeting said, because few medical researchers have devoted themselves to a study of the problem.

As the American Medical Association defines it, alcoholism is a form of drug dependence characterized by preoccupation with alcohol and loss of control over its consumption, usually leading to intoxication once drinking is begun. Its victims, who have a high tendency to relapse, usually suffer physically, emotionally, occupationally and socially as a result of their addiction.

For the most part, the A.M.A. says, "alcoholics are treatable patients" and the aim of treatment, as with other chronic diseases, is "control" rather than "cure." But before the alcoholic can be treated, he must be identified, and it is often the physician who has the first opportunity to do so.

The A.M.A. points out that alcoholism is most susceptible to treatment before it has really begun. The survey by the Washington researchers identified "escape drinkers"–those who drink to relieve tension, to forget their worries, to change their moods and to relax–as most likely to get into trouble with alcohol.

Dr. Mendelson said that a number of myths must be dispelled to assure proper treatment of the problem. One such myth, he said, is that the typical alcoholic looks like a skid-row bum.

"This is true of only about 5 per cent of problem drinkers," he said. "Most of them ride the commuter trains five days a week."

Neither is it appropriate to regard the alcoholic as "someone who is a delinquent, who lacks willpower or who is possessed by a demon," the doctor said.

He cited a recent research finding that indicated that alcoholism might be biochemically similar to narcotics addiction. Researchers at the Veterans Administration Hospital in Houston found that a metabolic product of alcohol joins with a brain chemical to form a new compound that in some ways resembles morphine.

It is possible, Dr. Mendelson suggested, that prolonged exposure to large quantities of alcohol sets off a chain of chemical events that eventually leads to physical addiction–"the person is hooked."

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DISCUSSION QUESTIONS

1. Why does the American Medical Association believe that alcoholism is most amenable to treatment before it has really begun?
2. How can those who are most likely to get into "trouble" with alcohol be identifed?
3. Compare alcoholism with narcotics addiction.

Soviet Renews Drive Against Alcoholism as Ban on Sale of Vodka Is Suggested

By JAMES F. CLARITY
Special to The New York Times

MOSCOW, Jan. 12 – The sobering-up station at 1 Petrovsky Boulevard was operating normally. In a 30-minute period, policemen firmly led in four men ranging in age from about 25 to 50, none shabbily dressed.

With a sign on the wall above his head warning against influenza rather than alcoholism, a police lieutenant registered the drunks in a book. Then they were taken away by a white-coated attnedant to be washed and given a bed to sleep it off. One man required medication for cuts on his face.

A few blocks away, on Sadovo Samotechnaya, one of Moscow's main arteries, a man shouted wildly, sending small children running, before he fell to the snow-covered sidewalk and was picked up by a policeman and a passer-by.

A middle-aged woman carrying a shopping bag of groceries staggered along a small back street in midafternoon. She stopped and leaned against a building, took a dozen more unsteady steps, and stopped to lean again.

In most sections of Moscow it is difficult to walk for more than 15 minutes in the evening without seeing someone who is thoroughly drunk.

Last week the Soviet press once again began a campaign against drunkenness with articles suggesting prohibition of the sale of vodka and describing excess drinking by teenagers in a small town. While Soviet authorities do not disclose their estimate of the number of alcoholics in this country, the recurring campaigns are considered an indication that officials consider the drinking problem a serious one.

The newspaper articles did not present drunkenness or alcoholism as a disease possibly requiring psychiatric treatment. They barely mentioned the need for medical treatment of problem drinkers. Nor were the causes of alcoholism discussed. The thrust of the campaign was against the Russian national drink–vodka. Little concern was expressed for other types of potable alcohol.

Prof. A. Gertsenson, in an article in Izvestia, the Government newspaper, summarized the opinions on drunkenness offered in letters from 130 doctors, educators, economsits and others. The opinions, the professor wrote, could be divided into four categories of suggested solutions: prohibition and limitation of the production and sale of alcoholic drink, 54 letters; repressive administrative measures 27; medical and economic measures, 25, and preventive measures, 24.

Among the proposals were total prohibition within two to three years, closing sidewalk beer stands and outlawing the sale of drinks to those under 21. There were also conflicting suggestions: one would raise the price of alcohol, another would lower it. One called for the sale of vodka in smaller bottles, another in larger bottles. Some called for an increase in the production of beer and light wines.

Other solutions included the opening of more coffee and tea shops, with higher taxes on automobiles and motorcycles to compensate the state, which controls liquor production, for the money it would lose.

Many of the proposals were directed against the drunk or alcoholic. No distinction between the terms was made in the article. One suggestion would give the drunkard's pay directly to his family. Others would deprive him of work bonuses and reduce his pension.

Medical treatment, voluntary or involuntary, was also proposed. Writers and film industry officials were criticized for failing to join "the struggle against drunkenness." Stiffer penalties for people who brew liquor at home were also suggested.

Komsomolskaya Pravda, the Communist youth organization newspaper, published two articles on drunkenness this week. One said that some adolescents in the Central Russian town of Kimry had been brought to the sobering up station more than 10 times in the last year. The article blamed the example of the town's adults and the easy access to alcohol. It called for "orderly citizens" to patrol the streets to help the police make Kimry "intolerable for drunkards."

The paper also published a letter from Viktor Loginov, who said, "All my life I dreamed of writing a letter against vodka." The letter called for immediate reduction of the legal hours of sale of vodka, no sales on Saturday and Sunday and eventual prohibition.

Mr. Loginov wrote that he had no objection, however, to the drinking of champagne, dry wines or cognac. Such liquids, he said, were made by "talented" people. "The fruits of their labor are not harmful to people," he added.

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DISCUSSION QUESTIONS

1. What distinction would you make between a drunkard and an alcoholic?
2. How effective would the suggestions for dealing with alcoholism in the Soviet Union be in the United States?

Britain Warned on Teen Drinking

STUDY SEES A RISING PROBLEM MORE SERIOUS THAN DRUGS

By BERNARD WEINRAUB
Special to The New York Times

LONDON, July 30 – Alcoholism among Britains's teen-agers is developing into a medical and social problem that surpasses narcotics addiction, a detailed medical report on alcoholism has warned the British public.

"The potential teen-age drinking problem," it said, "should give far more cause for alarm than drug addiction. Worse still, the [over-all] problem is developing. There was a reduction in the number of alcoholics between the wars, but since the 1940's there has been a steady increase."

The report of the Medical Council on Alcoholism outlined the results of research since the council began work in 1967. It said that alcoholism had emerged as the third major health hazard in the country, closely following heart disease and cancer.

Problem Often Concealed

"In Britain alone there are at least 300,000 sufferers in various stages of the disease," said the report, which was issued yesterday. "This could be considerably higher were it not for the fact that the alcoholics, and their families, have a facility for concealing their problem."

"Alcohol is a drug, like any other drug, but it is more pleasant to take and easier to get," the council said. "It is resorted to by some under stress, but just why we don't know. What we must find out, in addition to the extent of the problem, is why some persons become alcoholic while others under similar conditions do not."

Alcoholism costs British industry £100-million, or $240-million, a year, the report said. A recent survey showed that the total number of beds available in Britain in special alcoholic units was 407. The council estimated that 200,000 of the 300,000 alcoholics in Britain required some form of hospitalization.

Dr. Max Glatt, the medical council's vice chairman and an expert on alcoholism, said: "One sees an increasing number of alcoholics in their 20's. Many of them say that they have been drinking to excess for more than 10 years. The trend in this country is that alcoholics are getting younger."

In an interview, the psychiatrist said: "The reasons for this are an interaction of numerous factors. It may have to do with affluence and the fact that youngsters have more money to buy drinks. It may have to do with greater independence or permissiveness or the general unrest and dissatisfaction and insecurity that so many young people have. Many of these young people feel that they simply cannot compete.

"It may have to do also with the advertising that is aimed at young people," Dr. Glatt observed. "There are numerous factors involved here."

The legal drinking age in Britain is 18.

Alcohol has also been referred to as a principal problem among American youths.

U.S. Campus Problem

William W. Moore Jr., executive director of the National Council on Alcoholism in New York, said at an Alcoholics Anonymous convention in Miami last July 4 that marijuana was "a distant second" to alcohol in drug abuse on American college campuses.

"We recognize the seriousness of other drug problems," Mr. Moore said at the time, "but we know that these problems are not even remotely as widespread as alcoholism."

At the same conference, Dr. John L. Norris, a physician and chairman of the general service board of Alcoholics Anonymous, said that alcohol was probably more dangerous than domestic marijuana.

However, in an answer to a question, Dr. Norris said that if he had a son or daughter in college who was determined to use either alcohol or marijuana he would probably prefer that he or she used alcohol.

"We have at least lived with alcohol long enough to know its effects," he explained.

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DISCUSSION QUESTIONS

1. What are the possible factors responsible for the increasing number of young alcoholics in Britain?
2. Do you think that these same factors also apply to the young people in the United States?
3. Evaluate the statement made by the physician in this article "that if he had a son or daughter in college who was determined to use either alcohol or marijuana, he would probably prefer that he or she used alcohol. 'We have at least lived with alcohol long enough to know its effects.' "

ALCOHOL

Fable	Fact
Alcohol is a stimulant.	Alcohol appears to be a stimulant because one's inhibitions are released as a result of the depressant action of alcohol on the cortex of the brain.
Because of its caloric value, alcohol is a nourishing food.	Alcohol is not a proper substitute for usual foods in a balanced diet because it is lacking in nutrients needed for growth and maintenance of good health.
Drinking cannot cause overweight.	Although alcohol is not fattening in itself, it may cause overweight because its calories must be used immediately and unneeded food is stored, usually as fat.
Alcohol is not a drug.	Alcohol may be classified as a sedative, tranquilizer, hypnotic, anesthetic, and a narcotic, depending upon the quantity consumed.
Champagne has the same intoxicating effects as other noncarbonated wines.	Champagne and other sparkling or carbonated wines, though no higher in alcoholic content than noncarbonated wines, produce intoxicating effects faster because the carbonation speeds the passage of alcohol through the stomach.
Switching or mixing drinks will make you drunk.	Switching or mixing drinks won't make you more drunk than nonswitching. The degree of drunkenness is determined by the total amount of alcohol your blood absorbs, not by the flavor of the beverage. However, for some people, switching is more likely to cause nausea and vomiting, possibly because of the various flavorings and mixers used.
Fresh air, cold shower, and coffee will reduce the effects of excessive drinking.	These may produce a short-lived alertness and even an illusion of sobriety, but they do not in any way increase the speed with which the body disposes of alcohol and therefore do not hasten the sobering-up process.
Alcohol is beneficial for an individual suffering from exposure to the cold.	The feeling of warmth induced by alcohol is an entirely false sensation, since alcohol does not increase the rate at which the body produces heat. Following a brief surface reaction of warmth, the body temperature falls.

SMOKING: Grade 8

Generalizations

SMOKING IS A CRITICAL HEALTH PROBLEM. 104

SMOKING HAS A HARMFUL EFFECT ON THE BODY. 105

THERE ARE SOCIAL AND PSYCHOLOGICAL FACTORS THAT CONTRIBUTE TO THE SMOKING HABIT. 112

SMOKING IS A CRITICAL HEALTH PROBLEM

Content	*Suggested Student Activities*
The American Indian smoked tobacco in cigars, pipes and cigarettes. He also chewed tobacco.	Compares the use of tobacco by the American Indian with the use of wine in other cultures.
The use of tobacco became widespread in Europe after it was brought from the new world during the 15th and 16th centuries.	Does research and makes a report about how tobacco was first introduced into Europe.
Opposition to the use of tobacco developed in Europe because it was regarded as an unattractive habit. For example, in 1615, King James I of England issued a decree against the use of tobacco, calling it a filthy habit, dangerous to the lungs.	Indicates what basis King James I had for claiming that tobacco was dangerous to the lungs. Justifies the wisdom of the decree promulgated by King James in the light of today's findings. Indicates what might have been the reactions to this decree.
Despite efforts to discourage the use of tobacco, smoking has persisted throughout the centuries.	
Scientific research on the possible relationship of smoking to lung cancer began in 1900 when an increase in lung cancer was noted by investigators.	
The consumption of tobacco has increased at a rapid rate during this century. (See chart on *Production of Cigarettes 1900-1968*, page 106.)	
In the early 1950's, a series of scientific investigations showed that smoking is detrimental to health.	
In 1954, the American Cancer Society and the British Medical Council reported that the death rate for cigarette smokers is higher than for those who do not smoke cigarettes.	
In 1962, the Royal College of Physicians of London called cigarette smoking a serious hazard to health.	
In 1964, a special advisory committee to the Surgeon General of the U.S. Public Health Service reported, in *Smoking and Health*, that cigarette smoking is a health hazard of sufficient importance in this country to warrant appropriate action.	Does research and makes a report on why the advisory committee to the surgeon general was formed. Uses *Smoking and Health* as a reference.
Since the 1964 report, there have been two follow-up studies (1967, 1968) made by the U.S. Public Health Service which support and strengthen the conclusions of the 1964 committee.	
Other countries have recognized that smoking is	

Content

harmful to one's health and have taken steps to control cigarette advertising.

In the United States, a federal law (PL 89-92, 1965) provided that cigarette cartons and packages contain on the side panel the statement: "Caution: Cigarette Smoking May Be Hazardous to Your Health."

In 1969, a federal law (PL 91-222) was passed banning cigarette advertising on television and radio after January 1, 1971, and strengthening the health warning on cigarette packages so that it now must read: "Warning: The Surgeon General Has determined That Cigarette Smoking Is dangerous to Your Health."

Suggested Student Activities

Indicates why Congress passed the law banning cigarette advertising on television and radio and how this law affected cigarette smoking in the United States.

Suggests other legislation that might help to reduce smoking. Indicates whether legislation is an effective means to reduce smoking.

Clips cigarette advertisements from magazines and newspapers. Analyzes the propaganda techniques used to make cigarette smoking attractive.

After observing currently used antismoking advertising techniques, develops original advertisements that might be used by the mass media. Displays such advertisements in school. Sends copies to such organizations as the American Cancer Society and the American Heart Association.

SMOKING HAS A HARMFUL EFFECT ON THE BODY

Content

Tobacco is made of the dried leaves of the tobacco plant.

Tobacco smoke consists of many complex substances, some of which irritate the lungs and other parts of the respiratory tract.

Nicotine, a drug found in tobacco smoke, acts as a stimulant on the nervous system, increasing the activity of various organs in the body.

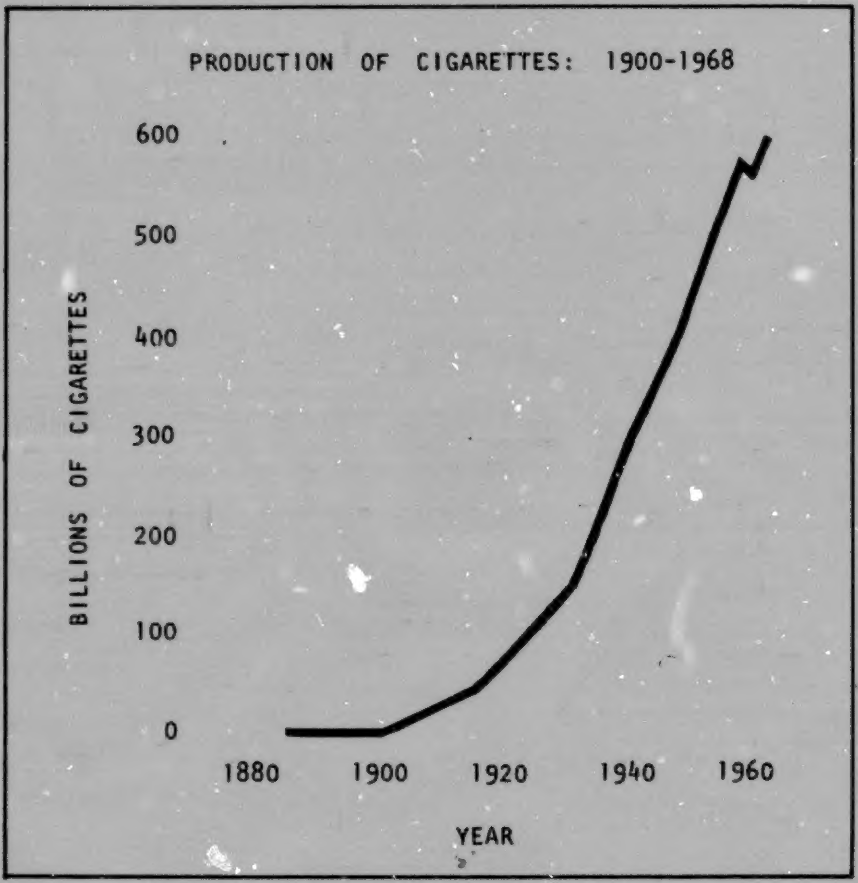
The chief effect of nicotine is on the heart, blood vessels, digestive tract, respiratory system, and kidneys.

Suggested Student Activities

Traces the path of air in the respiratory system using a model and/or chart. Identifies parts of the respiratory system that are affected by tobacco smoke. (See illustration, Respiratory System, page 110.)

Compares the physical effects of alcohol and tobacco on the body.

Reads and reports about the effects of nicotine on the heart, blood vessels, digestive tract, respiratory system, and kidneys.



Reprinted from *Chart Book on Smoking, Tobacco, Health*

DISCUSSION QUESTIONS

1. What factors are related to the sharp increase of cigarette consumption during this century?
2. How would a reduction in cigarette smoking affect the national economy?
3. What factors are affecting the rate of consumption in the 1970's?

Content	*Suggested Student Activities*
Nicotine causes the habit-forming effects of tobacco. The amount of nicotine in cigarettes, cigars, and pipe tobacco varies with the brand of tobacco used. The amount of nicotine available to the body depends on whether or not it is deeply inhaled. **Tar** is a thick, dark-brown mass formed by the particles in tobacco smoke. (See Experiment: Tar Accumulation from Cigarette Smoke, page 114.) The tar in tobacco smoke contains a large number of harmful substances such as: *Carcinogens*, which have produced cancer when they have been applied to the skin of animals under experimental conditions. *Phenol*, which destroys the protective action of the cilia, the tiny, hairlike projections in the respiratory tract. *Other chemicals*, which cause a cough and are probably responsible for the destruction of lung tissue and emphysema. **Carbon monoxide** is among the potentially harmful gases in tobacco smoke. Carbon monoxide reduces the ability of the blood to carry oxygen and is responsible for shortness of breath among smokers.	Referring to the table, Tar and Nicotine Content (p. 192), discusses the following questions: 1. Why does this government agency provide such a table for the public? 2. How does the tobacco industry use the data on this table as part of their sales promotion? 3. What further steps might the government take to protect the public from the hazards of smoking? 4. How might a consumer use this table to good advantage? 5. How might the design of the table be changed to make it more helpful to the reader? 6. What additional information should be included in this table? Participates in inviting a team coach to discuss why he does not permit his athletes to smoke.
While some filters are effective in reducing tar and nicotine in tobacco smoke, there is no evidence that filters remove all the hazards of cigarette smoking.	Using a source, such as the Consumers Union, reports facts regarding cigarette filters.
Pipe smoke and cigar smoke are usually not inhaled and are therefore considered less hazardous than cigarette smoke.	Indicates why cigar and pipe smoking are considered generally less harmful than cigarette smoking.
Three Public Health Service reports on cigarette smoking, released in 1964, 1967, and 1968, state that the risk of death is about 700 percent higher for men who smoke cigarettes than for nonsmokers. The risk of death is also higher for women who smoke than for those who do not.	Reads and reports about *The Health Consequences of Smoking* for a review of the current medical literature on smoking and health.
The reports by the Public Health Service were based on three main kinds of scientific evidence: animal experiments, clinical and autopsy studies, and population reports.	

Content	*Suggested Student Activities*
The greater the number of cigarettes smoked daily, the higher the death rate.	
Life expectancy among young men is reduced by cigarette smoking.	
The risk of cigarette smoking is greater for those who start smoking at an early age.	
The risk of cigarette smoking is greater for those who inhale.	
Death rates for cigar and pipe smokers are not significantly higher than for those who are nonsmokers.	
DISEASES CAUSED BY SMOKING	
Cigarette smoking is a cause of diseases such as cancer, chronic bronchitis, emphysema, and coronary artery disease.	Views films, such as *Smoking and You.*
Cancer is the uncontrolled growth of cells within the body. As cancerous cells multiply, they invade healthy tissue and spread through the body. When cancerous cells invade an organ, they interfere with its normal function and destroy it. Lung cancer is one type of this disease.	
Cigarette smoking is the most important cause of primary lung cancer in men.	Obtains resource materials about lung cancer from the American Cancer Society and the National Tuberculosis and Respiratory Disease Assocation. Contributes the materials to the class library for use by students.
Cigarette smoking also seems to be the most important cause of lung cancer in women, although much less research has been done among women smokers.	Participates in contacting a representative of the American Cancer Society or a physician in the community to lead a discussion on the relationship of cigarette smoking to lung cancer.
The risk of developing lung cancer is directly related to the length of time one smokes, the number of cigarettes smoked daily, and the degree of inhalation.	
The risk of developing lung cancer may be reduced markedly by stopping cigarette smoking.	
Other types of cancer that develop more frequently among cigarette smokers than nonsmokers are cancer of the larynx, esophagus, and urinary bladder.	
Pipe and cigar smoking may cause cancer of the mouth, tongue, and lips.	

Content

Chronic bronchitis is a constant inflammation of the bronchial tubes in the lungs. The patient coughs continuously and is short of breath.

Emphysema is a disease in which the lung tissue loses its elasticity and can no longer expand and contract easily to draw in and force out air, thus interfering with the efficient transfer of oxygen and carbon dioxide to and from the blood stream. (See Experiment: Effects of Emphysema, page 115. Materials and assistance may be obtained from the science department.)

The patient with emphysema suffers from coughing and shortness of breath.

There is a connection between cigarette smoking and emphysema.

As a cause of crippling disability, emphysema ranks second only to heart disease.

Coronary artery disease is a condition in which the coronary arteries, blood vessels supplying the heart muscles, become narrow and roughened.

The risk of death from coronary artery disease is 70 percent greater for smokers than for nonsmokers.

Cigarette smoking affects the body in other ways.

It makes the heart work harder by increasing the rate and blood pressure. (See experiment, page 116.)

It causes small blood vessels to contract, thereby reducing the flow of blood and resulting in the lowering of skin temperature.

It interferes with the ability to enjoy a high level of physical fitness by decreasing the breathing capacity.

It reduces the appetite and dulls the senses of taste and smell.

It slows or stops the cleansing action of the cilia lining the air passage.

Suggested Student Activities

Using sources such as *Cigarette Smoking, Chronic Bronchitis, and Emphysema*, does research and makes a report on diseases of the respiratory system related to smoking.

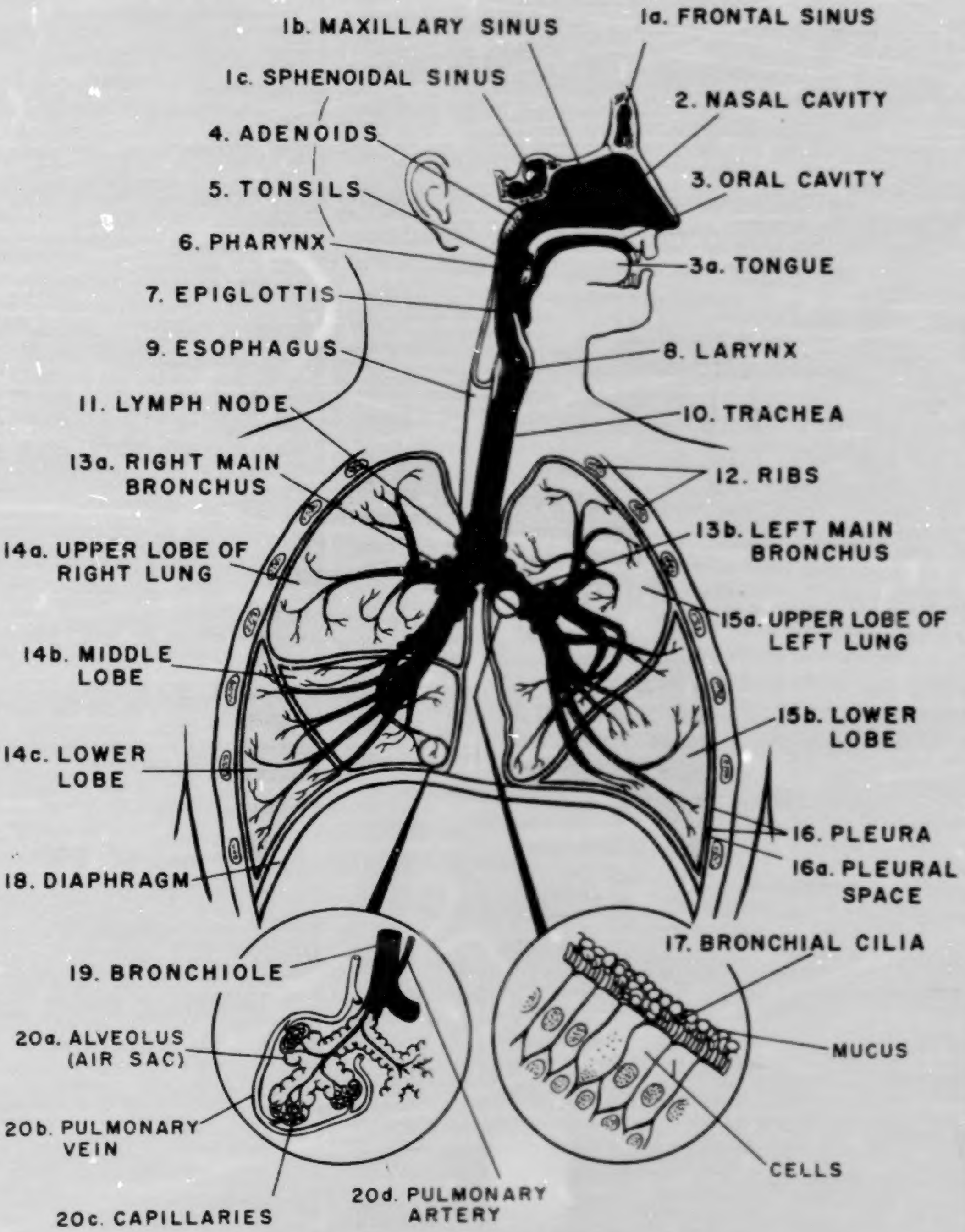
Discusses the following questions:

Why is it especially unwise for an athlete to smoke?

Why are professional athletes refusing to endorse tobacco products? Is this wise?

Reads and reports about information regarding the relationship of smoking to Buerger's disease.

THE RESPIRATORY SYSTEM


1b. MAXILLARY SINUS
1a. FRONTAL SINUS
1c. SPHENOIDAL SINUS
2. NASAL CAVITY
4. ADENOIDS
5. TONSILS
3. ORAL CAVITY
6. PHARYNX
3a. TONGUE
7. EPIGLOTTIS
9. ESOPHAGUS
8. LARYNX
11. LYMPH NODE
10. TRACHEA
13a. RIGHT MAIN BRONCHUS
12. RIBS
13b. LEFT MAIN BRONCHUS
14a. UPPER LOBE OF RIGHT LUNG
15a. UPPER LOBE OF LEFT LUNG
14b. MIDDLE LOBE
15b. LOWER LOBE
14c. LOWER LOBE
16. PLEURA
16a. PLEURAL SPACE
18. DIAPHRAGM
17. BRONCHIAL CILIA
19. BRONCHIOLE
20a. ALVEOLUS (AIR SAC)
MUCUS
20b. PULMONARY VEIN
CELLS
20d. PULMONARY ARTERY
20c. CAPILLARIES

THE RESPIRATORY SYSTEM

The chart of the respiratory system (see page 110) shows the apparatus for breathing. Breathing is the process by which oxygen in the air is brought into the lungs and into close contact with the blood, which absorbs it and carries it to all parts of the body. At the same time the blood gives up waste matter (carbon dioxide), which is carried out of the lungs with the air breathed out.

1. The SINUSES (Frontal, Maxillary, and Sphenoidal) are hollow spaces in the bones of the head. Small openings connect them to the nasal cavity. The functions they serve are not clearly understood, but include helping to regulate the temperature and humidity of air breathed in, as well as to lighten the bone structure of the head and to give resonance to the voice.
2. The NASAL CAVITY (nose) is the preferred entrance for outside air into the respiratory system. The hairs that line the inside wall are part of the air-cleansing system.
3. Air also enters through the ORAL CAVITY (mouth), especially in people who have a mouth-breathing habit or whose nasal passages may be temporarily obstructed, as by a cold.
4. The ADENOIDS are overgrown lymph tissue at the top of the throat. When they interfere with breathing, they are generally removed. The lymph system, consisting of nodes (knots of cells) and connecting vessels, carries fluid throughout the body. This system helps to resist body infection by filtering out foreign matter, including germs, and producing cells (lymphocytes) to fight them.
5. The TONSILS are lymph nodes in the wall of the pharynx that often become infected. They are an unimportant part of the germ-fighting system of the body. When infected, they are generally removed.
6. The PHARYNX (throat) collects incoming air from the nose and mouth and passes it downward to the trachea (windpipe).
7. The EPIGLOTTIS is a flap of tissue that guards the entrance to the trachea, closing when anything is swallowed that should go into the esophagus and stomach.
8. The LARYNX (voice box) contains the vocal cords. It is the place where moving air being breathed in and out creates voice sounds.
9. The ESOPHAGUS is the passage leading from mouth and throat to the stomach.
10. The TRACHEA (windpipe) is the passage leading from the pharynx to the lungs.
11. The LYMPH NODES of the lungs are found against the walls of the bronchial tubes and trachea.
12. The RIBS are bones supporting and protecting the chest cavity. They move to a limited degree, helping the lungs to expand and contract.
13. The trachea divides into the two main BRONCHI (tubes), one for each lung, which subdivide into the lobar bronchi—three on the right and two on the left. These, in turn, subdivide further.
14. The right lung is divided into three LOBES, or sections. Each lobe is like a balloon filled with sponge-like lung tissue. Air moves in and out through one opening—a branch of the bronchus.

15. The left lung is divided into two LOBES.

16. The PLEURA are the two membranes, actually one continuous one folded on itself, that surround each lobe of the lung and separate the lungs from the chest wall.

17. The bronchial tubes are lined with CILIA (like very small hairs) that have a wave-like motion. This motion carries MUCUS (sticky phlegm or liquid) upward and out into the throat, where it is either coughed up or swallowed. The mucus catches and holds much of the dust, germs, and other unwanted matter that has invaded the lungs and thus gets rid of it.

18. The DIAPHRAGM is the strong wall of muscle that separates the chest cavity from the abdominal cavity. By moving downward, it creates suction to draw in air and expand the lungs.

19. The smallest subdivisions of the bronchi are called BRONCHIOLES, at the end of which are the alveoli (plural of alveolus).

20. The ALVEOLI are the very small air sacs that are the destination of air breathed in. The CAPILLARIES are blood vessels that are imbedded in the walls of the alveoli. Blood passes through the capillaries, brought to them by the PULMONARY ARTERY and taken away by the PULMONARY VEIN. While in the capillaries the blood discharges carbon dioxide into the alveoli and takes up oxygen from the air in the alveoli.

Reprinted by permission of the National Tuberculosis and Respiratory Disease Association.

THERE ARE SOCIAL AND PSYCHOLOGICAL FACTORS THAT CONTRIBUTE TO THE SMOKING HABIT

Content

Young people usually start smoking to satisfy social and psychological needs. These needs include a desire to:

Act grown up
Be part of a crowd
Assert independence
Relieve discomfort in social situations
Have something to hold
Satisfy oral cravings

At first, smoking may be an unpleasant experience causing symptoms such as coughing, nausea, and dizziness.

Suggested Student Activities

Discusses the problem of why some students in the school smoke while others do not, using the following problem-solving procedures:

1. Surveys student population in reference to smoking habits and reasons.
2. Assembles the data and interprets it.
3. Arrives at conclusions regarding why some students smoke while some do not.
4. Discovers methods of utilizing the conclusions to cause a reduction in the number of students who smoke.

Content

It usually doesn't take long for a new smoker to become strongly habituated.

The habituated smoker is uncomfortable if he or she does not have cigarettes or other forms of tobacco regularly.

Once habituated, the satisfaction the user gains in smoking is basically an easing of an unpleasant craving for tobacco rather than a pleasure in its own right.

The more that young people come into contact with others who smoke, i.e., parents, siblings, friends, and adult leaders, the more likely it is that they will develop the smoking habit.

Many teen-agers have made the decision not to smoke for reasons such as the following:

Recognition of the health danger

High financial cost

Lack of desire to start the habit

Influence derived from the home in which parents and siblings don't smoke

Interference with athletic activities

Unhygienic state, marked by a stale odor and yellow stains on teeth and fingers.

Although it is difficult, people of all ages have successfully stopped smoking.

Some suggestions often found effective for breaking the cigarette habit follow:

Develop motivation for stopping.

Make a definite decision to stop.

Announce the decision to stop.

Ask for support from family and friends.

Select a time when there is a break in normal routine.

Expect several difficult days. Plan for diversions for these days.

Once the program is begun, keep the goal clearly in mind.

Suggested Student Activities

Plays a role involving a situation in which two friends are trying to convince a member of their group to smoke a cigarette.

Reacts to the following statement often made by teen-agers: Nobody worries much about a disease he might get 40 or 50 years in the future.

Interviews adult smokers. Asks questions such as the following:

1. How long did it take before you became a strongly habituated smoker?
2. Have you attempted to stop smoking? If so, did you find it difficult?
3. If you were able to turn the clock back, having the current information on the health hazards of smoking, would you start smoking?

Discusses why anyone would begin to smoke in light of all the information presently available about health hazards related to smoking.

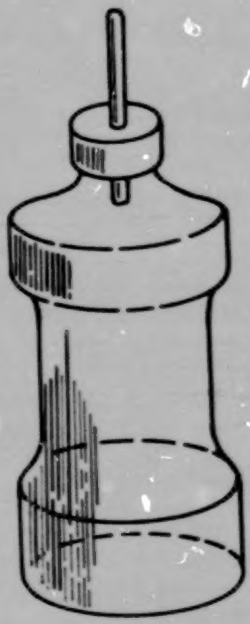
Using current price of cigarettes, calculates the total cost of smoking one pack of cigarettes a day for a week, a month, one year, five years, etc.

Participates in a panel to discuss the problem: to smoke or not to smoke.

Reads and discusses the pamphlet, *How to Break the Cigarette Habit.* Indicates the purpose of widely publicizing the information that 100,000 doctors have stopped smoking cigarettes, and why this information is more effective than a mere statement that smoking is bad.

Discusses organizing a "former smokers" club at your school. Indicates values of such an organization.

Experiment:
TAR ACCUMULATION FROM CIGARETTE SMOKE



EQUIPMENT

Plastic bottle (detergent) or other plastic container, transparent, if possible

Ball-point pen barrel or other tubing approximately the size of a cigarette

Cotton

Cigarettes

PROCEDURE

Rinse container thoroughly.

Make an opening in bottle cap for tubing.

Place tubing in opening and seal it tightly. Use cement or clay, if needed.

Insert loosely packed cotton into tubing.

Insert cigarette into open end of tubing.

Press firmly on plastic bottle to force air out before lighting cigarette; proceed with slow and regular pumping action.

Withdraw cotton from tubing to show accumulation of tar.

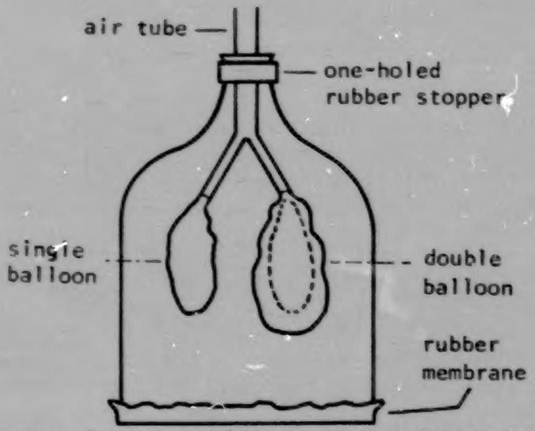
Pass container around for students to smell and to observe that smoke continues to be expelled for a period of time.

Reprinted from *Smoking and Health Experiments, Demonstrations, and Exhibits* (Washington, D.C.: Government Printing Office, 1969).

Experiment:
EFFECTS OF EMPHYSEMA

Obtain several new balloons of similar size and elasticity. Blow up one balloon, and allow it to remain inflated for a day or so. When the class is ready for the demonstration, deflate the balloon and note that it does not reduce to its original size. Why? Insert one of the unused balloons into the used one and note the air pocket between the two.

Set up the bell jar apparatus, as shown at the right, with the single balloon attached to one arm of the air tube and the double balloon attached to the other arm, to simulate two lungs. Tie a rubber membrane across the bottom of the bell jar to simulate a diaphragm. Pull down on the rubber membrane and observe that the balloons fill with air. Note that the double balloon has an air pocket which interferes with its inflation. Push the rubber membrane up into the jar and observe the difference in the deflation of the "lungs."



The action of filling and emptying the balloons may be compared to respiration; if both lungs are functioning properly, they inflate and deflate properly. But if the alveoli of the lungs have been stretched too thin, air pockets form in the lung tissue. The contractile power of the lungs is destroyed.

Reprinted from *Teachers Guide on Smoking and Health* (New York: American Cancer Society).

Experiment:

EFFECT OF SMOKING ON HEART RATE

It is recommended that students do this experiment with an adult smoker at home and record findings.

The arterial pulse, taken at the wrist, is an accurate indication of the heart rate.

EQUIFMENT

1 wrist watch

Cigarettes

PROCEDURE

Take the pulse of an adult smoker, by placing two middle fingers of the right hand on the thumb side of the wrist. The adult's pulse should be taken two or three times to establish a base line accuracy.

Record the pulse rate as the number of pulsations felt per minute.

Have the adult light a cigarette; then take the pulse after he has taken three or four puffs.

When the cigarette is finished, take the pulse every fifteen minutes until the pulse rate returns to normal.

Chart the findings on a graph and determine how many extra heart beats are caused by one cigarette.

Calculate how many heart beats are caused by one pack of cigarettes.

At each beat the heart pumps approximately 70 cc of blood. Calculate the extra volume of blood pumped by the heart induced by smoking one package of cigarettes.

CONCLUSION

Smoking puts an extra load upon the heart.

SMOKING: Grade 11

Generalizations

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SMOKING ADVERSELY AFFECTS HEALTH

Content

During the years between 1964 and 1968 approximately 1,500,000 Americans died prematurely from diseases associated with cigarette smoking.

The Surgeon General's Report in 1964 and subsequent studies in 1967 and 1968 found conclusive evidence that smoking is injurious to health and is a cause of many diseases.

By quitting or significantly reducing the smoking habit, people may delay or avert deaths which result from lung cancer, chronic respiratory diseases, and diseases of cardiovascular origin.

Lung cancer. Cigarette smoking is by far the most important cause of primary lung cancer in men. Although the evidence is not conclusive, it probably is also related to lung cancer in women.

The risk of developing lung cancer increases with the length of time one has smoked and the number of cigarettes smoked daily.

Chronic bronchitis. Cigarette smoking is the most frequent cause of bronchitis in the United States.

Emphysema. The risk of dying of pulmonary emphysema is increased by cigarette smoking.

Coronary artery disease. Male cigarette smokers have a higher death rate from coronary artery disease than non-cigarette smoking males.

Other problems. Cigarette smokers experience more days of disability than do non-smokers.

Smoking during pregnancy is associated with decreased infant birth weight, increased incidence of prematurity, and increased incidence of spontaneous abortion.

Suggested Student Activities

Discusses why the cigarette-smoking epidemic should be an important consideration in our concern for human ecology.

Writes about the following theme: Man Has Entered a Century in Which Germs Are Not the Only Cause of Disease and Death.

Using sources such as the American Cancer Society and the United States Public Health Service, obtains and makes a report about data which substantiate the finding that stopping or reducing smoking will delay or avert death from lung cancer, chronic respiratory diseases, and diseases of cardiovascular origin.

Using information obtainable from the United States Public Health Service, prepares a graph showing the trend in death rates for pneumonia, influenza, tuberculosis, and cancer of the lungs among males in the United States from 1900 to the present. Analyzes the meaning of these trends and those factors which may be responsible for them.

Reviews literature provided by the American Cancer Society to determine whether or not the death rate for cancer has increased in countries other than the United States. Indicates factors other than smoking which may be responsible for this.

Using a model and/or chart of the respiratory system, traces the path of smoke.

Reads and reports about what happens to the cilia in the respiratory tract of persons who are heavy cigarette smokers.

Views films, such as *Smoking and You, Is Smoking Worth It?* and *The Time to Stop Is Now,* presenting effects of smoking on the lungs.

Reviews literature offering experimental evidence regarding the physiological effects of smoking on pulse rate, blood pressure, and coronary blood flow. Prepares a summary of the findings and makes a report.

Using *The Health Consequences of Smoking* as a resource, makes a report about the effects of smoking on pregnancy; relationship of cigarette smoking to emphysema; etc.

Harm for Youths Found in Smoking

First Evidence of Danger to Lungs is Reported

Three Yale Medical School physicians have reported what they say is the first documented evidence of lung damage in teen-agers who have smoked cigarettes for just a few years.

The doctors did breathing tests on 365 students in four high schools in the New Haven area.

If teen-agers stopped smoking, the doctors said, "at least part of this damage to the lungs might be reversible." Yet, the doctors emphasized that they could not exclude permanant effects, including premature arrest of lung development, in teen-age cigarette smokers.

Dr. Janet E. Seely, Dr. Eugenija Zuskin, and Dr. Arend Bouhuys, all of whom are specialists in lung physiology and disease, reported the results of the tests in the issue of Science that was published yesterday.

Dr. Seely, who is now at McGill University in Montreal, said in a telephone interview that she and her colleagues had done the study because teen-agers generally are not impressed with the known ultimate risks of lung cancer from cigarette smoking.

Accordingly, she said that the Yale group did the studies over a period of several months in 1969 because "objective evidence of damage to their own lung function might be more convincing to teen-agers than the faraway danger of lung cancer." It took more than year to analyze the results of the studies.

The New Haven students included 195 boys and 170 girls, aged 15 to 19 years. Of these students, the doctors said that 50 per cent of the boys and 37 per cent of the girls were regular cigarette smokers.

Because these percentages of teen-age smokers were similar to those reported by other investigators, the researchers said that they believed that their sample was representative of the general population of teen-agers.

With consent from each of the teen-agers and their parents, the doctors said that they had tested the total volume of each student's lungs and the rate of flow of air in their exhaled breaths. Such tests are called flow-volume curves.

The breathing tests of the teen-age smokers showed poorer results than did those of the nonsmokers, the researchers said. The lung tests, the doctors said, provided data that were "much more objective as compared to the students' own statements about their symptoms."

Symptoms such as "cough, phlegm and shortness of breath were much more common among smokers than among nonsmokers," the researchers said. They noted that their findings of "this striking preponderance of symptoms among the smokers" agreed with studies that British physicians reported in 1969.

In Lancet, a British medical publication, Dr. W.W. Holland and Dr. A. Elliott reported in 1969 that "smoking was associated with respiratory-tract symptoms and the more the child smoked the more likely he was to have these symptoms." The British doctors said that "changes in smoking habits do, however, affect the frequency of respiratory-tract symptoms."

This study, however, was based on questionnaires rather than actual breathing tests.

Dr. Seely said in the interview that she was unaware of any prior studies that documented lung damage by breathing tests in cigarette smokers at such a young age.

The abnormal lung function test results among smokers, the doctors said, "are probably due to partial obstruction of small airways, although loss of lung elastic recoil may be a contributory factor."

Some experts, the doctors said, believe "that damage to small airways early in life may cause premature arrest of lung development." However, Dr. Seely said that such evidence was considered speculative.

Lungs continue to become more voluminous, particularly in boys, Dr. Seely said, even after individuals stop growing in height.

"Follow-up studies of lung function in adolescents who stop smoking should clarify the question of whether arrest of lung development actually occurs," the doctors said.

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DISCUSSION QUESTIONS

1. According to this report by three specialists in lung physiology, how would the stopping of smoking affect the lungs of the teen-ager?
2. React to the statement by one of the physicians that this study was done because teen-agers generally are not impressed with the known ultimate risks of lung cancer from cigarette smoking.
3. What are the probable causes of abnormal lung function among the teen-age smokers?

Study Finds Smoking Can Imperil Fetus

BY JANE E. BRODY

A British study of 17,000 births has shown that children born to mothers who smoked 10 or more cigarettes a day during pregnancy read less well and were less well adjusted socially at 7 years of age than children born to nonsmoking mothers.

The study also found a 20 per cent increase in the number of stillbirths and deaths shortly after birth among the babies of smoking mothers.

The study, described by its director, Dr. Neville R. Butler, yesterday to the sixth World Congress of Gynecology and Obstetrics at the Americana Hotel, involved all the babies born in Britain during the week of March 3, 1958. The week was chosen at random.

The children are being studied at various ages – ages 7, 11 and "hopefully into their geriatric years," Dr. Butler said – to determine the relationship between various events during pregnancy, labor, delivery and postnatal environment and the intellectual and social development of the child.

Four Month Lag

Previous studies, both in the United States and abroad, have shown that smoking mothers tend to have smaller babies, but the British study described yesterday is the first to relate the fact that the mother smoked during pregnancy to the intellectual and social development of her child.

Dr. Butler, who is a pediatrician at the Royal Hospital for Sick Children in Bristol, England, said that the children of smoking mothers were four months behind the average reading level at the age 7, and were "significantly less well adjusted socially" as rated by their teachers on a standardized 100-point psychological test.

He said that the finding held up even when other possible contributing factors – such as the number of children in the family, the age of the mother and the socioeconomic status – were taken into account.

Dr. Butler said in an interview that he suspected the finding was related to the fact that during pregnancy the fetus of the smoking woman may have a diminished supply of nutrients and oxygen available to it. But, he said, he could not rule out the possibility that smoking mothers were psychologically different from nonsmoking mothers, and that this in turn may adversely affect their children's development.

Other factors that the study has shown to be related to the child's future development include premature and postmature birth. The children born more than three weeks before term were more likely to be retarded in the ability to read and draw at age 7 than were full-term babies, Dr. Butler reported.

Special Schooling Needed

Babies born more than three weeks after term were more likely to be socially maladjusted as 7-year-olds, the pediatrician said.

He added, however, that the percentage of prematurely and postmaturely born children who required special schooling was only twice that of the normal-term babies.

On the other hand, full-term babies who weighed less than 5½ pounds at birth – the victims of so-called "intrauterine growth retardation" – were four times more likely to require special schooling, Dr. Butler said. This condition occurs more commonly among the poor and malnourished.

Dr. Butler said that the only complications of labor found in the study to be associated with an increased chance that the child would be socially or intellectually retarded were the rare condition in which the umbilical cord comes down the birth canal before the baby's head, and prolonged labor lasting more than 24 hours.

No significant development effect was found in relation to such factors as bleeding during pregnancy, Caesarean section, forceps delivery or fetal distress just before birth.

Dr. Butler concluded that to date his study has shown that the effect of socioeconomic status "far outweighs any of the complications of pregnancy or labor" in terms of the child's future development.

"If you want to improve the general intelligence of the population," he remarked, "spend your money on improving social background, nutrition and stopping smoking."

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DISCUSSION QUESTIONS

1. What were the major findings of the British study?
2. Using a chart and/or model of a fetus, show how nutrients, oxygen, and waste products are exchanged between mother and fetus.
3. How might a diminished supply of oxygen to the fetus affect intellectual development?

ATTITUDES TOWARD SMOKING ARE CURRENTLY UNDERGOING MAJOR CHANGES IN OUR SOCIETY

Content	*Suggested Student Activities*
At one time, cigarette smoking was equated with being popular, having a good time, and being grown up.	Describes various social and psychological forces which influence our attitudes toward cigarette smoking.
Mass media advertising techniques regarding smoking have capitalized on the relationship of smoking to manliness, attractiveness, being desired, and a feeling of contentment.	Identifies various propaganda techniques used by advertising people for the purpose of influencing cigarette smoking, particularly among the young. Brings in illustrations of these techniques.
The notion that cigarette smoking is pleasurable is being replaced by the idea that smoking is a critical health problem.	Writes about the theme: How We Can Make Cigarette Smoking an Unattractive Symbol in Our Society.
Mass media counter-propaganda techniques focus on smoking as a harmful or deadly habit.	Discusses the validity of the position taken by the tobacco industry that the case against cigarette smoking is not warranted since it is not based on direct cause and effect relationships but on statistical observation and animal experiments.
Tobacco manufacturers, generally, still refuse to accept scientific proof of the health hazards of cigarette smoking.	
Reports from various sources indicate that increasing numbers of people are stopping or reducing their smoking.	Discusses reasons why the Council for Tobacco Research, an organization supported by the tobacco companies, is involved in research on the effects of tobacco.
The greatest decline of cigarette smoking has occured among the 17- to 24-year age group.	Reacts to the following statement made by a pharmacist who had stopped selling cigarettes: "It doesn't make sense to improve people's health in one end of the store and wreck it in the other."
Young people are partially influenced in their smoking habits by parents and other adults.	Reacts to the following statement: The cigarette endures only by example.
By getting more people to stop smoking, pressure to create a nonsmoking environment is increased.	Using the resources of the Student Council, participates in developing a schoolwide antismoking campaign.
Organizations and agencies that provide information and research in the area of smoking are: the National Clearinghouse for Smoking and Health, the American Cancer Society, the American Heart Association, the National Tuberculosis and Respiratory Disease Association.	Participates in preparing a class bulletin board to display antismoking posters.
Federal laws have been passed which regulate cigarette advertising.	Discusses why legislation in the control of cigarette advertising has been so long in coming.
The Federal Cigarette Labeling Act, passed by Congress in 1965, requires that every package of	

Content	Suggested Student Activities
cigarettes sold in this country carry the warning: "Caution: Cigarette Smoking May Be Hazardous to Your Health."	
The Federal Trade Commission (FTC) has the responsibility of reviewing cigarette advertising and publicizing rating of tar and nicotine content of all cigarettes sold in the United States.	Refers to chart, Tar and Nicotine Content of Cigarettes (see p. 127). Indicates why the government published this chart and how this chart has affected the cigarette market.
Beginning in 1968, the Federal Communications Commission (FCC) required broadcasters to devote significant time to antismoking messages.	Discusses antismoking messages on television indicating how effective these have been and how they might be made more effective.
Federal legislation has been passed banning the advertising of cigarettes on radio and television, effective in January 1971, and strengthening the cigarette package warning label, which now reads: "Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health."	Discusses possible effects of this legislation on cigarette smoking. Participates in a class debate about the proposition: Resolved that a Federal law banning the production of cigarettes should be enacted and enforced.
Some national magazines are refusing to accept cigarette advertising.	
Some insurance companies are offering preferred risk rates on premiums to nonsmokers or to those who have not smoked for several years.	Writes to insurance companies regarding their practice of issuing preferred risk rates to nonsmokers. Indicates how such a policy is beneficial to the consumer and how it benefits the company.

Women's Smoking Found to Decline for First Time

By JANE E. BRODY

Special to The New York Times

SAN DIEGO, Sept. 11—For the first time since the emancipated female of a half-century ago dared defy convention by smoking in public, cigarette smoking has declined among adult American women, a new national survey has shown.

Despite a population increase of about 3 million adult women, there are now 300,000 fewer female smokers than there were in 1966, the survey found. In that period 3.8 million women joined the ranks of former smokers.

The women are among the more than 13 million adult Americans who have given up cigarettes in the last four years, bringing to 29 million the number of Americans who are now members of the "unhooked generation," the survey found. Nearly two-thirds of the adult population are now nonsmokers, where less than a decade ago nearly half of adult Americans smoked, it found.

In the new survey, a random and representative sampling of 5,000 American adults were interviewed as to their smoking behavior. A computer was then used to extrapolate the findings to apply them to the population at large.

The survey was described by Dr. Daniel Horn to the first National Conference on Smoking and Health, which ended here today.

Dr. Horn is director of the National Clearinghouse on Smoking and Health, an arm of the United States Public Health Service, and is secretary of the National Interagency Council on Smoking and Health, an organization concerned with antismoking education and sponsor of the three-day conference at the Town and Country Hotel here.

In a convention hall remarkably clear of cigarette smoke (if any participant was still hooked on cigarettes, he managed to conceal it from his colleagues), scientists, psychologists, physicians and information specialists debated how best to reduce cigarette smoking to little more than a burning memory.

Dr. Horn's new data on female smoking came as a great relief to the 300 conference participants, many of whom thought women were still taking up cigarettes at an ever-increasing rate. "You've come a long way, baby—toward a shorter life" was the conferees' reply to the current barrage of female-oriented cigarette advertising.

The conference devoted many hours of discussion to female smokers, who, once they started smoking, seem to cling stubbornly to the habit.

"Women," Dr. Horn remarked in an interview, "seem to find it harder than men to quit smoking, and even when they quit they find it harder to stay quit." The survey data shows, for example, that nearly half the men who have smoked have given it up, while only a third of women who have smoked are now former smokers.

Carefully avoiding any remarks about the "weaker sex," psychologists at the meeting suggested that the modern American woman often smokes to reduce the tensions of a life in which she plays many roles, and she may be more wedded to her cigarette than men, many of whom smoke mainly for pleasure.

The Surgeon General of the Public Health Service, Dr. Jesse L. Steinfeld, suggested to the conference that smoking among women might be a symbolic act, "evidence of woman's emancipation and equality with men."

"Perhaps," he added, "as woman's role in society changes in the wake of the current 'liberation,' movement, she will find smoking less important for her image."

The prospect of weight gain was also seen as a serious deterrent to women who want to give up cigarettes. Although many former smokers gain weight simply because they eat as a substitute for smoking cigarettes, recent studies have shown that stopping smoking is often associated with metabolic changes that add pounds despite careful dieting.

One pretty participant said that the price she had had to pay for breaking her two-pack-a-day habit was 20 extra pounds and a new wardrobe. "And, if anything, I ate less when I quit than while I was smoking," the now pudgy young woman insisted.

How to swell further the ranks of nonsmokers, both male and female, is a problem to which there is no single solution, the conferees agreed.

Dr. Jerome L. Schwartz, professor of public health at the West Virginia University School of Medicine, reviewed a hundred different approaches to the stop-smoking problem and identified, at least, what does not seem to work.

In general, he found, drugs and tranquilizers do not work, and neither do the deconditioning techniques used by some psychologists, such as firing a gun behind the back of a smoker everytime he takes a puff.

The "scare" approach also tends to meet with little success, Dr. Schwartz found. As Dr. Horn said, scare tactics may so arouse fear of the consequences of smoking that "the individual who feels he is unable to stop smoking is almost forced to stop listening."

Free withdrawal clinics, five-day plans and other group approaches to stopping smoking seem, on a long-term basis, to be about 20 per cent successful, Dr. Schwartz said, but he regards the recent proliferation of commercial stop-smoking groups as perhaps more promising.

Whatever approach is used, the conference speakers agreed that most people needed to try quitting several times before they finally succeeded.

Dr. Horn is hopeful that the growing ranks of nonsmokers, aided by the ban on television and radio cigarette advertising, which takes effect Jan. 2, will have a "snowball" effect.

"As more people quit, a climate develops in which it should be easier for others to quit," he remarked. "If this is so, the prospect of bringing cigarette smoking under control is bright."

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DISCUSSION QUESTIONS

1. How many adult Americans have given up cigarettes in the last four years?
2. Why have women found it more difficult to stop smoking cigarettes than men?
3. Why isn't the "scare" approach a successful one in getting people to stop smoking?
4. How can a climate be developed in school and in the community, which would make it easier for individuals to stop smoking?

13 Million Kicked the Habit

By GEORGE GETZE

SAN DIEGO, Cal. (LAT)–More than 13 million Americans have successfully quit smoking cigarets since 1966, the First National Conference on Smoking and Health has been told.

Daniel Horn, director of the National Clearing House for Smoking and Health, said yesterday there are actually 4½ million fewer smokers in the U.S. now than there were in 1966 despite an estimated population gain of more than 8 million.

He said the great changes in American smoking habits that these statistics represent are unique in the public health field.

Horn said anti-cigaret TV ads sponsored by the various health agencies have helped, but said they merely gave impetus to something that began with the first cigaret-lung cancer scare of the 1950s and which continued with the Surgeon General's report of 1964.

In 1970, Horn said, 42 per cent of American men and 31 per cent of American women smoke cigarets, compared with 52 per cent of men and 34 per cent of women who smoked in 1966.

A british epidemiologist said that despite optimistic statistics, the smoking of cigarets remains the biggest single problem in the entire field of preventive medicine in the western nations of Europe and North America.

Dr. C.M. Fletcher, of the Royal College of Physicians, said that a 35-year-old man loses about 15 minutes of life for every cigaret he smokes, and that the "worldwide epidemic of lung cancer" has been caused by cigarets much more demonstrably than by any industrial poison.

"Lung cancer is almost exclusively a smoker's disease," Fletcher said.

A third speaker, Emerson Foote, said that permitting profits to be made from cigarets is a kind of "collective national idiocy."

Foote, former chairman of the National Interagency Council on Smoking and Health, suggested that all cigaret advertising be banned and that cigarets be made illegal.

Foote said that untold millions of Americans already in their graves were killed by cigarets.

He recommended that the federal government spend at least $100 million a year to educate the people in the dangers of cigarets.

He said that now is a time of "impending tragedy" for those who willfully persist in smoking, and described the money spent advertising cigarets as a "promotion of death."

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DISCUSSION QUESTIONS

1. How many fewer smokers are there in the United States now than there were in 1966?
2. What were the factors that affected this change in the American smoking habits?
3. How do you feel about the suggestion made that all cigarette advertising be banned? About making cigarettes illegal?

Health Warning to Appear on Cigarettes in Britain

Special to The New York Times

LONDON, March 6 – Britain's tobacco manufacturers have agreed voluntarily to print health warnings on cigarette packages. The message in red, "Warning by H.M. Government: Smoking can damage your health," is expected to appear on packages sold in stores by this summer.

The agreement was announced in the House of Commons today by the Secretary for Social Services, Sir Keith Joseph. It came, not unexpectedly, after months of negotiation between the tobacco industry and Government officials.

The accord, which does not apply to imported cigarettes, also calls for the establishment of a committee to keep under review the question of less dangerous kinds of smoking. Scientists chosen by the tobacco industry and the Ministry for Social Services will be on the committee.

One of its major tasks will be to determine the tar and nicotine content of the various brands and publish the findings.

Drive by Government

Sir Keith said that the agreement would be coupled with a vast Government drive to persuade people not to smoke. He said that life insurance companies would be asked to consider lower premiums for nonsmokers and that public transport officials and theater owners would be asked to set aside more accommodations for nonsmokers.

Cigarette advertisements on television have been banned here for a number of years. However, smoking is still permitted in a few of London's large department stores and in most movie theatres. There are special cars for smokers on subway and railway trains.

The Government has already spent $240,000 on antismoking publicity in the current financial year. Sir Keith said additional money would be provided "to mount a short but intensive television campaign to bring the risks involved in cigarette smoking to families in their homes."

'Holocaust' Is Seen

The action comes 10 weeks after the Royal College of Physicians gave its second report on the hazards of smoking in nine years. The report, by Britain's leading body of physicians, said that cigarette smoking had created a "holocaust" causing the death of 27,500 Britons annually.

The report which compared the present-day impact of smoking as cause of death to the effects of typhoid and cholera on previous generations, said that a 30-year-old man smoking 15 cigarettes a day could expect to lose about five and one-half years of life.

Sir Keith stressed in his statement to the House that the manufacturers had "agreed voluntarily" to print the health warning "in clear type." According to the design of the package, he said, "the warning will either be placed on both edges of the packet or, if on only one side, it will be presented with greater emphasis."

CURBS ON GERMAN TV

Special to The New York Times

BONN, March 16–West German's Health Ministry and the West German cigarette industry have agreed on stringent new curbs on cigarette advertising, including a "step-by-step" discontinuance of television advertising, it was confirmed here today.

A spokesman for the ministry said that the agreement, superseding a much more lenient accord reached in 1965, provides for complete cessation of television advertising by the end of 1972.

The curbs on television advertising will hurt West Germany's cigarette manufacturers much less profoundly than similar steps did in the United States. Because of strictly limited advertising time on West Germany's state-run television, the West German cigarette industry has never spent more than 15 per cent of its advertising outlays on television.

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DISCUSSION QUESTION

Compare the antismoking campaigns being planned in Great Britain and West Germany with that of the United States..

SOCIAL AND PSYCHOLOGICAL FACTORS CONTRIBUTE TO THE SMOKING HABIT

Content

Young people begin to smoke for one or more of a variety of reasons, such as the following:

Need to satisfy curiosity

Feeling of being grown up

Desire to be part of the group

Influence exerted by advertising

Acceptance of smoking in our culture

Smoking behavior may not be directly related to a lack of knowledge, but rather to underlying psychological factors.

Once smoking becomes a pattern of behavior, it is usually extremely difficult to give up.

BREAKING THE CIGARETTE HABIT

For regular cigarette smokers to succeed in breaking the habit, they should consider their reasons for wanting to smoke and compare them with their reasons for wanting to give up the habit.

A cigarette smoker may want to give up the habit for one or more of a number of reasons, such as the following:

Recognition and acceptance of the fact that smoking is a personal threat to health

Acquiescence to the wishes of family or friends

Desire to serve as a role model

Wanting to improve appearance

Demonstration of self-control

Because there are many types of smokers, there is no single best method of stopping the cigarette habit.

People who smoke do so for reasons such as the following:

They feel it's a way of reducing tension.

They seek a psychological lift.

They receive oral gratification.

Some recommended methods of breaking the cigarette habit are:

Suggested Student Activities

Interviews smokers to establish their reasons for starting to smoke. Discusses findings.

Indicates why cigarette smoking is referred to as the "cigarette habit."

Considers possible approaches to deter youthful members of the family from smoking.

Uses the National Smokers Test, published by the National Clearinghouse on Smoking and Health of the United States Public Health Service, to identify the different types of smokers by their underlying psychological reasons for smoking.

Interviews members of the family and/or friends who have recently stopped smoking. Finds out what motivated them to stop and the methods used to achieve their goal. Reports results.

Reads and makes a report about material in pamphlets, such as *How to Break the Cigarette Habit.*

Surveys programs in the community which help smokers to stop their habit. Reports about techniques used.

Participates in developing a plan for organizing an antismoking clinic in the school.

Tar and Nicotine Content of Cigarettes

(Shown in Increasing Order of Tar Values)

From Federal Trade Commission, March, 1969

Brand	Type	Tar (mg/cig)	Nicotine (mg/cig)
Marvels	Reg.	4	0.1
Sano	Reg.	4	0.2
Carlton	King	5	0.4
Marvels	King, M	5	0.2
Marvels	King	7	0.3
King Sano	King	7	0.3
King Sano	King, M	8	0.3
Cascade	King, M	8	0.3
Frappe	King, M	10	0.3
Duke of Durham	King	10	0.4
Montclair	King, M	11	0.7
Life	King	11	0.7
Tryon	King, M	11	0.8
Kent	Reg.	12	0.7
Tryon	King	12	0.9
True	King, M	13	0.7
Vogue (Colors)	King (HP)	13	0.4
True	King	13	0.7
Tempo	King	14	0.8
Domino	King, M	14	0.7
Silva Thins	100 mm, M	15	0.9
Silva Thins	100 mm	15	0.9
Parliament	King (HP)	16	1.1
Parliament	King	17	1.1
Sano	Reg., NF	17	0.5
Kent	King	17	1.1
Kent	King (HP)	18	1.1
L & M	Reg.	18	1.0
Tareyton	100 mm	18	1.1
Tareyton	King	18	1.1
DuMaurier	King (HP)	18	1.5
Lark	King	18	1.2
Virginia Slims	100 mm	18	1.3
L & M	King (HP)	19	1.1
Pall Mall	95 mm, M (HP)	19	1.1
Lucky Filters	100 mm, M	19	1.1
Kool	King, M	19	1.6
Belair	King, M	19	1.6
Raleigh	King	19	1.5
Pall Mall	95 mm (HP)	19	1.2
Virginia Slims	100 mm, M	19	1.4
Pall Mall	100 mm, M	19	1.2
Philip Morris	King (PB)	19	1.4
Marvels	Reg., NF	19	0.7
Lark	100 mm	19	1.3
Stratford	King	20	0.7
Viceroy	King	20	1.5
Vogue (Black)	King (HP)	20	0.6
L & M	100 mm	20	1.2
Alpine	King, M	20	1.3
Kent	100 mm	20	1.3
Lucky Filters	King, M	20	1.1
Benson & Hedges	Reg. (HP)	20	1.4
Wings	King	20	1.5
L & M	King	20	1.2
Pall Mall	100 mm	20	1.3
Yukon	King, M	20	0.8
Philip Morris	King, M (PB)	20	1.5
L & M	100 mm, M	20	1.3
Home Run	Reg., NF	20	1.7
Benson & Hedges	King (HP)	21	1.5
Viceroy	100 mm	21	1.5
Chesterfield	101 mm	21	1.3
Salem	King, M	21	1.4
Old Gold	King	21	1.2
Kool	100 mm, M	21	1.6
Marlboro	King (HP)	21	1.4
Chesterfield	King, M	21	1.2
Picayune	Reg., NF	21	1.7
Lucky Filters	100 mm	21	1.4
Marlboro	King, M	21	1.4
Newport	100 mm, M	21	1.4
Newport	King, M	21	1.3
Newport	King, M (HP)	21	1.4
Spring	100 mm, M	21	1.2
Camel	King	21	1.3
Oasis	King, M	21	1.2
Winston	King	21	1.3
Galaxy	King	21	1.5
Benson & Hedges	100 mm, M	21	1.5
Stratford	King, M	21	0.8
Mapleton	King	21	0.9
Lucky Filters	King	21	1.4
Benson & Hedges	100 mm	21	1.5
Marlboro	King	22	1.5
Kool	Reg., NF, M	22	1.6
Salem	100 mm, M	22	1.5
Winston	King (HP)	22	1.4
Marlboro	100 mm (HP)	22	1.5
Domino	King	22	1.0
Winston	100 mm	22	1.6
Winston	100 mm, M	22	1.6
Marlboro	100 mm	23	1.6
Sweet Caporal	King	23	1.4
Century	100 mm	23	1.5
Chesterfield	King	23	1.5
Gauloises Disque Bleu	Reg.	23	1.3
Old Gold	Reg., NF	23	1.4
Half & Half	King	24	1.7
Mapleton	Reg., NF	24	0.9
Marvels	King, NF	25	0.9
Chesterfield	Reg., NF	25	1.4
Philip Morris	Reg., NF	25	1.6
Gauloises Caporal	Reg., NF	25	1.3
Helmar	King (HP)	25	1.5
Piedmont	Reg., NF	25	1.4
Domino	King, NF	25	1.1
Camel	Reg., NF	26	1.6
Stratford	King, NF	26	1.1
Colony	100 mm, M	26	1.4
Holiday	King	26	1.7
English Ovals	Reg., NF	27	1.9
Pall Mall	King, NF	29	1.7
Colony	100 mm	29	1.8
Lucky Strike	Reg., NF	29	1.7
Chesterfield	King, NF	29	1.6
Old Gold	King, NF	29	1.8
Bull Durham	King	29	1.9
Omar	Reg., NF	30	1.7
Raleigh	King, NF	30	2.2
Herbert Tareyton	King, NF	31	1.8
Players	Reg., NF (HP)	32	2.0
Philip Morris Commander	King, NF	32	2.1
Fatima	King, NF	33	1.9
Holiday	King, NF	35	2.1
English Ovals	King, NF	36	2.6

NF—Non-Filter (All other brands possess filters)

M—Menthol

HP—Hard Pack

PB—Plastic Box

U.S. DEPARTMENT OF HEALTH, EDUCATION, & WELFARE/Public Health Service
Health Services and Mental Health Administration

Content

Choosing a specific time to break the habit

Rewarding oneself for nonsmoking

Using a harmless substitute for smoking, such as candies

Changing one's regular brand

Putting cigarettes in different places so that they are not found immediately

Following a regular program of physical exercise and activity during the initial period of cigarette withdrawal

Tapering off, i.e., smoking fewer cigarettes each day until one stops entirely

Stopping abruptly ("cold turkey")

REDUCING THE RISKS OF SMOKING

Ways of minimizing the effects of smoking on health follow:

Smoking a pipe or cigars

Selecting a cigarette with low tar and nicotine content (Filter-tip cigarettes are, at best, only less damaging to lung tissue than nonfilter cigarettes.)

Smoking cigarettes only half-way down since most tar and nicotine are found in the last few puffs

Taking fewer draws on each cigarette

Reducing inhaling

Smoking fewer cigarettes per day by selecting times of the day not to smoke

Individuals who stop smoking note certain advantages.

Endurance for athletic activities may be increased.

Food tastes better.

Mouth has a more pleasant taste.

Clothing is free of tobacco odor.

Teeth and fingers are free of stain.

Money is available for other things.

Satisfaction is derived from having demonstrated the will power to stop smoking.

Suggested Student Activities

Studies chart Tar and Nicotine Content of Cigarettes (see p. 127). Suggest ways of improving this chart.

Reads and makes a report on a pamphlet, such as *If You Must Smoke.*

Discusses how the following relates to the health of young people: We have the resources to make a better self, a better community, a better world; but do we care.

DISEASE PREVENTION and CONTROL

Grade 8

Generalizations

COMMUNICABLE DISEASES ARE CAUSED BY MICRO-ORGANISMS TRANSMITTED DIRECTLY OR INDIRECTLY FROM INFECTED PERSONS OR ANIMALS. 130

PREVENTION AND CONTROL OF COMMUNICABLE DISEASES ARE RELATED TO BLOCKING PATHWAYS OF INFECTION, IMPROVING BODY RESISTANCE, AND PROVIDING EARLY TREATMENT. 133

COMMUNICABLE DISEASES STILL REMAIN AN IMPORTANT CONCERN FOR THE COMMUNITY DESPITE MODERN ADVANCES IN MEDICAL SCIENCE. 136

CHRONIC AILMENTS ARE LEADING CAUSES OF DISABILITY AND DEATH. 141

COMMUNICABLE DISEASES ARE CAUSED BY MICROORGANISMS TRANSMITTED DIRECTLY OR INDIRECTLY FROM INFECTED PERSONS OR ANIMALS

Content

Communicable diseases are caused by infectious agents transmitted from one person to another either directly or indirectly.

Most communicable diseases generally follow a specific course of development, such as:

The incubation period, which means the time when the organisms are growing in the body and are overcoming the body defenses, the time before symptoms appear

The active period, which is a short period for most infectious diseases, usually accompanied by fever and other symptoms of the disease

The convalescence period, which is the interval from the time symptoms disappear until the patient is entirely well

Each communicable disease has a causative agent, commonly referred to as germs, organisms, microbes, or microorganisms.

Bacteria which are one-celled organisms of varying size may be seen through a powerful microscope.

Bacteria may be found everywhere; but most are harmless to man.

Bacteria are classified by their shapes. They include:

bacilli—spherical

cocci—rod-shaped

spirochetes—spiral-shaped

Bacteria, like all other organisms, reproduce rapidly in a favorable environment.

When conditions are unsuitable for growth, many bacteria change to a spore-form that is more resistant to extreme environmental conditions.

Bacteria are the cause of diseases, such as gonorrhea, syphilis, and tuberculosis.

Suggested Student Activities

Using data obtainable from the New York City Department of Health, prepares a graph showing the most prevalent communicable and noncommunicable diseases in the city in the last decade.

Reads and reports about beliefs and ideas about disease held by ancient peoples.

Reads and reports about the contributions to the conquest of disease by scientists, such as Louis Pasteur, Robert Koch, Joseph Lister, and Walter Reed.

Discusses: What are the unique hazards with respect to the spread of disease which may be present during the incubation period?

Discusses how the medical use of antibiotics or other medicines affect the period of active illness.

Discusses the importance of understanding the germ theory of disease.

Demonstrates the way in which germs are spread by using the following steps:

1. Place a needle into moldy part of an orange
2. Pierce a second orange with contaminated needle
3. Clean and sterilize the needle and pierce a third orange
4. Label all oranges and observe the changes that occur daily for a week or more

Views films, such as *Microorganisms That Cause Disease.*

Reads *Microbe Hunters*, by P. DeKruif, and reports about man's battle against disease.

Communicates with a food canning company to determine measures for preventing food spoilage and reports to class.

Using class textbook as a source, prepares a chart showing the various diseases caused by bacteria.

Content	*Suggested Student Activities*
Antibiotics, when properly administered, are generally effective against most forms of bacterial infection.	Reads and reports about the extent to which the improper use of antibiotics during illness may cause drugs to be ineffective at a later infection.
Viruses are the smallest of disease-producing organisms. They are all around us and can be seen only with an electron microscope.	Reads and reports about the use of the electron microscope in the study of viruses.
Viruses are generally not affected by antibiotics.	
Most of the common childhood diseases, such as measles, mumps, chicken-pox, and whooping cough, are caused by viruses.	
Protozoa are one-celled organisms which are much larger than bacteria. They belong to the lowest division of the animal kingdom.	
Most protozoa are harmless, but some are causative agents of serious infectious diseases, such as malaria and amoebic dysentery.	Discusses reasons for the increased incidence of malaria among the military in the war in Vietnam.
Protozoan diseases are a problem only in certain sections of the United States. They are far more prevalent in tropical countries.	Using the World Health Organization (WHO) as a resource, reports about the efforts of this organization to eradicate malaria.
Parasitic worms, which are many-celled animal forms, include hookworms, tapeworms, trichinae, and pinworms.	
People may become infected with tapeworm or trichinae when they eat meat or fish that is improperly cooked.	Discusses the role of governmental agencies in protecting the public from purchasing contaminated meat. Does research to find out about the federal law which regulates the purity and safety of foods.
People may become infected by hookworm if they walk barefoot on soil contaminated by fecal material containing the hookworm.	Reads and reports about the relationship of proper waste disposal with decreased incidence of diseases such as hookworm.
Pinworm infections are found mostly in children, usually living in close quarters in hospitals, camps, etc. This condition can be controlled by personal hygiene and household cleanliness.	
Fungi, which are simple, nongreen plants, live off other living organisms.	Using as a resource, *Our Smallest Servants,* reads and reports about the beneficial use of fungi such as yeasts and molds.
Most fungi are harmless, although some cause diseases such as athlete's foot.	Discusses care of the feet in the prevention of athlete's foot.
Many communicable diseases can be avoided by understanding how organisms multiply and spread.	
Communicable diseases may be transmitted by:	

Typhoid Carrier Tied To Epidemic

By LAWRENCE K. ALTMAN

Special to The New York Times

HOUSTON, Oct. 25—At least one typhoid carrier and poor sanitation caused an epidemic of 56 cases of typhoid fever, including one death, among passengers and crew of the cruise ship Oronsay earlier this year, a Canadian health official reported here today.

Canadian bacteriologists found four typhoid carriers on the Oronsay, any one of whom could have spread the disease through the ship's contaminated water supply, said Dr. Ernest J. Bowmer, who directs the British Columbia Provincial Laboratories.

Most cases, Dr. Bowmer said, occurred among crew members who drank large amounts of water, such as those who worked in the engine room. Passengers, who drank boiled water in their tea, or drank beer, or beverages with soda water, tended to escape, he said.

The P & O liner had sailed from England and stopped, among other places, at Port Everglades, Fla., and San Pedro and San Francisco, Calif., before the epidemic was discovered when the ship arrived in Vancouver last January. Some passengers and typhoid carriers remained hospitalized through April, Dr. Bowmer reported at a meeting of the American Public Health Association.

System Cleaned Up

Canadian health officials took steps to chlorinate the ship's water supply, and the line remedied the poor sanitation system. There have been no further cases of the disease on the ship.

While carriers were once a major factor in spreading typhoid in this country, public health officials emphasize that modern means of control such as improved sanitation make an event like the Oronsay epidemic a rarity.

Though many people think of "Typhoid Mary" as a nickname for a mythical spreader of typhoid fever, she made her presence known in New York early in this century as the most famous typhoid carrier.

As a cook with reportedly poor sanitary habits, Mary Mallon spread the disease through the foods she prepared for socially prominent families. She was 40 years old when Dr. George Soper's epidemiological investigations, which covered just fragments of her culinary career, revealed that she had caused at least 53 cases and three deaths from typhoid in seven households and one hospital.

Unraveled Mystery

It was Mary's fate, Dr. Soper wrote in a medical report, to unravel much of the mystery that "surrounded transmission of typhoid and to call attention to the fact that it was 'often persons rather than things who offered the proper explanation when the disease occurred.'"

Mary, however, resisted proper explanations when health officials tried to explain her condition to her. Later, when she refused gall bladder surgery—the only treatment available for carriers in the pre-antibiotic era—and all other attempts to help her, city officials confined her to North Brother Island. When she pledged not to be a food handler, the Health Department released her.

But in 1915 violations by her were discovered when 20 persons got typhoid at Sloane Hospital for Women where she worked. She returned to North Brother Island, where she lived until her death in 1958.

A bacterium called salmonella typhi caused a typhoid victim to suffer fever, headache, malaise, diarrhea or constipation and sometimes a faint rash. Typhoid remains a serious disease although antibiotics have reduced the fatality rate from 10 per cent to about 3. However, from 2 to 5 per cent of these individuals, usually middle-aged women, become typhoid carriers.

Several Treatments

The carrier state can last indefinitely or cease after many months or years. A carrier can be released from supervision if the health department documents a series of negative cultures of stool and urine over period of several months. Doctors treat carriers with antibiotics and, sometimes gall bladder surgery.

Antibiotic therapy has allowed typhoid patients to make a more rapid recovery and has reduced the likelihood of carriers. Both the number of reported typhoid cases and carriers have declined in recent years.

Those carriers registered with health departments are probably least dangerous because they are aware of the condition and have been taught the necessity of careful hygiene. Health departments forbid them from working as food handlers.

More dangerous are the unknown carriers, such as on the Oronsay, who, while feeling "healthy," excrete the typhoid bacteria.

Meanwhile, by applying the public health measures such as good sanitation that many people now take for granted, doctors here point out that the number of typhoid cases—at one time a national menace—can be expected to decline toward zero.

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DISCUSSION QUESTIONS

1. What effect did the famous "Typhoid Mary" case have on our understanding of typhoid fever?
2. What precautionary steps should be taken by physicians before a known carrier is released from medical supervision?
3. What public health measures are important in the prevention of typhoid fever?
4. Why are situations like the Oronsay epidemic a rarity today?
5. How has modern antibiotic treatment affected typhoid fever?
6. How will the Oronsay epidemic story be helpful to you?

Content	*Suggested Student Activities*
Direct body contact with skin sores or sores in mucous membranes of an infected person or animal	
Airborne or droplet infections which result from sneezing or coughing	Prepares cartoons or posters for class display, showing how germs are spread through sneezing, coughing, etc.
Water which is polluted by intestinal discharges of men and animals	Discusses why mass immunization against typhoid fever would be necessary in areas struck by disasters such as hurricanes or earthquakes.
Indirect contact with articles such as dishes and silverware which may have been contaminated by a diseased person	After visiting some restaurants and/or food stores in the community, prepares a report on the sanitary conditions observed. Discusses actions to take to correct unsanitary conditions.
Milk and other foods which become infected through improper handling and thus serve as nutrients to large numbers of the infectious organisms growing in them	Reads and reports about milk pasteurization. Indicates how this process protects us from disease.
Insects which may be carriers of infectious diseases such as malaria and yellow fever	
Human carriers who may or may not be affected by the disease as in the case of carriers of typhoid fever	Discusses serious health consequences imposed on a community by human carriers of disease.
Infectious organisms which enter the body through a wound, as in tetanus	Indicates why tetanus is often a cause of death among drug addicts.
Bites as in rabies, a disease transmitted by the bite of a diseased warm blooded animal	Discusses why dogs who have bitten people are kept under observation for a period of 14 days.

PREVENTION AND CONTROL OF COMMUNICABLE DISEASES ARE RELATED TO BLOCKING PATHWAYS OF INFECTION, IMPROVING BODY RESISTANCE, AND PROVIDING EARLY TREATMENT

Content	*Suggested Student Activities*
BLOCKING PATHWAYS OF INFECTION	
Ways have been developed which interefere effectively with the spread of disease. Among these are the following:	Reads and reports about the responsibility of the U.S. Department of Agriculture in public health.

Content	*Suggested Student Activities*
Inspection of animals used as foods for humans Inspection of restaurants and food processing establishments Elimination of breeding places for disease-spreading insects Ratproofing of buildings Proper disposal of garbage Pasteurization of milk Refrigeration of foods Proper cooking of meats and fish Treatment and purification of water	Prepares a list of desirable practices to be followed in establishments where food is sold. Participates in a committee which will visit a bakery, restaurant, etc., and report about its findings. Discusses environmental conditions that might lead to a problem of rat control. Indicates which diseases are spread by rats and what steps could be taken by a community to deal with this problem of rat control. Discusses precautions which should be taken with respect to drinking water on a camping trip.
IMPROVING BODY RESISTANCE	
One of the most effective ways of protecting an individual from infectious disease is to increase his resistance.	
For an infectious disease to occur, the causative agent must be transmitted to a new host, enter the host, and overcome any resistance that might be present.	
Body Defenses. The natural defenses which protect the body from harmful organisms include the following:	Using a drawing or cartoon, illustrates the battle of the invading microbes opposing the human defenses of the body.
Skin which, if unbroken, provides the body with a protective covering	Views films, such as *Infectious Diseases and Natural Body Defenses.*
Secretions of the body, such as perspiration, tears, nasal secretions, saliva, and gastric juices, which wash away or destroy harmful organisms	
Hair which tends to filter organisms entering the body	
White blood cells (leucocytes), located in special organs of the body, which surround, destroy, and digest invading organisms	Interviews the school doctor or family physician about the importance of increased white blood cell count as a means of determining infection, and reports to class.
The yellow pus which develops in some infections consists of dead and living white cells, and invading organisms.	
Blood tests are important for medical diagnosis because the white blood cell count increases when infection is present.	
Antibodies, chemical substances found in blood plasma, which form against a particular disease	Discusses why travelers sometimes develop a disease common to a locality new to them but

Content	*Suggested Student Activities*
organism or toxin and act only against that disease organism or toxin	uncommon to their own community.
Some antibodies last a long time and give a person long-term immunity. Some last a short time and give short-term immunity.	Indicates why many of the early American Indians died from diseases brought to the new world by European settlers.
Fever which is helpful in fighting disease because most disease-producing organisms are less active at high temperature than at normal body temperature	Discusses the significance of the following statement: The problem sometimes is whether the fever is doing more harm to the germs or to the patient.
Fever mobilizes the body's resources against infection	
Health Practices. Resistance to disease can be improved by following good health practices, such as:	Discusses relationship of good health practices to the prevention of specific diseases.
Rest, relaxation and sleep	
Avoiding the misuse of alcohol, drugs, and tobacco	
Enjoying proper nutrition	
Exercising regularly	
Immunity to Disease. The family is responsible for adequate protection of its members against those diseases for which immunization is recommended. Immunity, a condition of the body in which there is a high level of resistance to a particular disease, prevents and controls communicable diseases. There are two types of immunity:	
Active immunity may be acquired naturally by having a particular disease and recovering from it or may be acquired artificially by the injection of substances, such as vaccines or toxoids into the body.	Reads and reports about Edward Jenner's discovery of the smallpox vaccine. Using the New York City Department of Health as a source, prepares a chart on the incidence of poliomyelitis in New York City for the past twenty years. Indicates why there was a sharp drop in the incidence of polio after 1955.
Active immunity provides the body with sufficient antibodies to overcome the same disease if it recurs	
Passive Immunity is developed in an individual by injecting antibodies produced by another individual or animal.	Discusses the importance of immunization as a preventive program in public health.
Passive immunity provides high resistance immediately but is very short-lived.	Interviews the school physician on the question of when it is medically advisable to provide an individual with passive immunization, such as, gamma globulin (GG).

EARLY DIAGNOSIS AND TREATMENT

The spread of communicable diseases may be	Discusses the problems that might arise from a situation such as the following: In 1966, New York State passed a law requiring all children

Content

minimized by discovering diseases early and by treating them promptly.

The most widely used method of treating infectious disease is through the use of drugs prescribed by a physician.

Antibiotics and sulfa drugs affect the basic cause of a particular disease by their action against bacteria.

Because of the possible side effects of some drugs, and because of increasing resistance of organisms to drugs, many physicians would prefer that diseases be cured by body defenses.

Suggested Student Activities

attending school to be vaccinated for polio. Some parents refused to follow this law because of their strong personal beliefs against immunization.

Reads biographies of scientists such as, Selman Waksman and Alexander Fleming. Reports about their contributions in the field of antibiotics.

Discusses the significance of the following statement in terms of our ongoing battle against disease: Medical science is engaged in a race between new antibiotics and changes resulting in resistant strains of bacteria.

COMMUNICABLE DISEASES STILL REMAIN AN IMPORTANT CONCERN FOR THE COMMUNITY DESPITE MODERN ADVANCES IN MEDICAL SCIENCE

Content

Included among the important communicable diseases that continue to be a challenging community problem are venereal disease, tuberculosis, and others.

VENEREAL DISEASES

Syphilis and gonorrhea, major health problems, are among the leading communicable diseases in the United States.

Despite our knowledge of their causes, their modes of transmission, and the fact that they can be treated and cured, the rate of venereal diseases continues to increase.

Early diagnosis and prompt treatment of venereal disease will prevent serious damage to the body and will also serve to prevent the spread of venereal disease in the community.

Unlike some communicable diseases which provide immunity when one has recovered, venereal disease may recur repeatedly. The most common venereal diseases, syphilis and gonorrhea, often infect an individual simultaneously.

Suggested Student Activities

Views films, such as *A Quarter Million Teenagers.*

Discusses factors which account for the recent rise in venereal disease among teenagers.

Participates in inviting a speaker from the Bureau of Preventable Disease Control of the New York City Department of Health to lead a discussion on venereal disease as a public health problem.

Discusses the individual's responsibility to the community in seeing that VD cases are reported and treated.

Discusses implications of New York State Public Health Law which permits a licensed physician to diagnose, treat, or prescribe for a case of venereal disease in a person under the age of

Content	*Suggested Student Activities*
	twenty-one without the consent or knowledge of the parent or guardian.
Indiscriminate sexual behavior increases the opportunity for an individual to be infected with a venereal disease.	Prepares a list of community health agencies whose services in the area of venereal diseases are available to young people.
An individual exposed to a venereal disease should seek prompt treatment from a private physician or health clinic.	Discusses how we can get more people who have been exposed to venereal disease to report their cases to a physician or health clinic.
Prompt case-finding, diagnosis, and treatment will reduce effects and spread of venereal disease.	Views films, such as *The Innocent Party*.
Syphilis is a communicable disease caused by a spirochete, a form of bacteria.	
Syphilis is spread by sexual contact with an infected person.	
Primary or early symptoms include a painless sore (chancre), usually around the genital organs.	
Symptoms are more easily noticed in the male because of his external sex organs.	
In the female, painless sores may be internal and hidden from view, hence be undetected.	
Primary symptoms may disappear without treatment but this does not mean that the disease has been cured.	
Untreated infections may result in disability, blindness, paralysis, insanity, or death.	
Modern treatment of syphilis is very effective. Most individuals who are diagnosed early can be cured with antibiotics, such as penicillin.	Reads and reports about the scientific work contributed by Dr. Paul Ehrlich in the treatment of syphilis.
The earlier syphilis is discovered and properly treated, the less chance there is of permanent damage.	
Gonorrhea is a communicable disease caused by the gonococcus, a spherical form of bacteria.	Views films, such as *Dance Little Children*.
Gonorrhea is spread by sexual contact with an infected person.	
Symptoms in the male include pus discharge ("drip") from the penis and severe burning in the urinary tract. These symptoms usually appear two to six days after exposure to an infected person.	
Symptoms in the female are not obvious and	

Content	Suggested Student Activities
usually go undetected. Within a few days after exposure to an infected person, the female may experience a mild burning in the genital area.	
In both male and female, if gonorrhea is untreated, it may cause sterility, blindness, heart trouble, and death. Treatment is usually successful with the use of antibiotics.	Discusses the following question: If an individual thinks he or she has gonorrhea, why is it unwise to wait and see what happens? Indicates why it is unwise to attempt self-treatment of gonorrhea.
TUBERCULOSIS	
Although medical science has greatly reduced the incidence of tuberculosis, more people between the ages of fifteen and forty-five years die each year from tuberculosis than from any other communicable disease.	
Tuberculosis is caused by a rodlike bacteria which usually affects the lungs.	
It is spread in the sputum or in droplets of moisture from the lungs of an infected person.	
Early diagnosis of this disease by tuberculin tests is an important means of minimizing its effects and its spread.	Visits local health center to become familiar with its role in community programs of tuberculosis prevention and control.
X rays are used to follow up and confirm cases where it is suspected that the tuberculosis organism is in the body.	Prepares posters encouraging people in the community to cooperate with health agencies in the tuberculosis detection program.
Drugs, rest, and nourishing food are important in the treatment of tuberculosis.	
POLIOMYELITIS	
Poliomyelitis is a communicable disease caused by a virus infection of the central nervous system.	
One of the most dramatic achievements in the history of medicine was the conquest of poliomyelitis, or polio, as it is usually called.	Compares the discovery of the polio vaccine with that of the smallpox vaccine. Indicates how they are similar; how they are different.
Today, the incidence of polio is at an all-time low in the United States.	Researches the reasons why the New York State Public Health Law no longer requires smallpox immunization.
Two types of vaccine are used in polio immunization:	
The Salk vaccine consists of killed virus particles from all three types of polio.	Reads and reports about the development of the polio vaccine by Dr. Jonas E. Salk.
This vaccine produces active immunity, but	

in certain cases an immune person may still be a carrier by harboring the polio virus in his body.

The Sabin vaccine is an oral vaccine containing living but chemically changed, harmless polio virus.

This vaccine seems to immunize the entire body and reduce or prevent the possibility of an immune person becomming a carrier.

Reads and reports about the development of polio vaccine by Dr. Albert B. Sabin.

RABIES

Rabies is a communicable disease caused by a virus which usually enters the body as a result of a bite from a rabid animal.

Although there is no known cure for rabies, there is a treatment which prevents the development of rabies in a person bitten by a rabid animal.

Where possible, the biting animal should be confined and observed by a health official for a period of ten days.

If the animal develops symptoms of rabies, prompt action must be taken in providing the Pasteur treatment for the person bitten.

Protection against rabies lies solely in prevention and requires public support and cooperation.

Views films, such as *Rabies Can Be Controlled.*

Reads and reports about the Pasteur treatment.

Using the American Red Cross First Aid Manual, reads and reports about the first-aid care recommended in the event of a dog bite.

Discusses responsibilities of a pet owner in the control of rabies.

ACUTE RESPIRATORY INFECTIONS

Acute respiratory infections, such as the common colds and sore throats, although generally not serious, are the leading cause of loss of time from school and from work.

Respiratory infections are usually spread by droplets of moisture from coughing, sneezing or breathing.

Reads and reports about ways in which respiratory infections are spread. Prepares posters depicting good and bad health practices designed to prevent and control the spread of such diseases.

The common cold is a communicable disease caused by a number of viruses.

Although the common cold is not a serious disease, it may lower the body's resistance to other diseases.

The common cold is most contagious in the early stages.

The best treatment for the common cold is

Using a source, such as "On the Way: Vaccines to Snuff Out Sniffles" by R. Bugg, reports about current research on the common cold.

Discusses factors which may influence the transmitting of a cold.

Evaluates widely advertised treatments for the common cold.

Man Bitten by Rabid Bat is Located

A citywide search for a middle-aged man bitten by a rabid bat while picking flowers ended last night when the victim Isaac Solomon of 2430 Haring Street in the Sheepshead Bay section of Brooklyn called city health authorities to ask if he was the man they were looking for.

Mr. Solomon, who began treatments to prevent incubation of the fatal, incurable disease last night, was saved almost by chance.

Herbert J. Edelman, a Health Department sanitarian, was strolling through the Sheepshead-Nostrand housing development Saturday afternoon when he encountered a middle-aged man who complained he had been bitten by a small animal while picking flowers.

Mr. Edelman spotted a common brown bat in some nearby shrubbery. In a few minutes, he stalked, captured and killed the tiny creature. But in the meantime the victim, who had shown Mr. Edelman two punctures on a finger, had left the area.

Mr. Edelman, to his wife's dismay, took the bat home and placed it in a plastic container in his refrigerator. Yesterday morning he carried it to the office.

The chief of the department's Veterinary Division, Dr. Jeroham Asedo, reported late yesterday that the bat appeared to have rabies. Conclusive results will not be available for eight days, Dr. Asedo said.

He issued a public call to the bite victim, however, urging him to begin antirabies treatment at once.

A Health Department spokesman said that while 35,000 dog bites are reported each year, only seven bat bites are recorded. But rabies is so common in bats, he said, that the standard treatment for a bite victim is to begin a series of antirabies injections.

The incubation period in humans is three to six weeks. Once infected, the victim invariably dies.

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DISCUSSION QUESTIONS

1. Why was it so important to begin rabies treatment immediately in this case?
2. How does one know if a biting animal has rabies?

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6 Dead in Outbreak of Whooping Cough

FRANKFORT, Ky., May 30 (AP)—At least six infants have died of whooping cough in Bell and adjacent Southeastern Kentucky counties this year, the State Health Department says.

The outbreak, counter to a general downward trend in whooping cough cases during the last 20 years, has affected hundreds of people in the area. The infant victims ranged in age from 2 months to a year old.

Dr. Loren Anderson of the department's Division of Epidemiology, said Tuesday that the outbreak had been difficult to diagnose because of its resemblance to influenza or some other respiratory diseases.

Children are required by state law to receive whooping cough vaccine before their second birthday, but the level of immunization is believed to be low in the southeastern area, Dr. Anderson said.

A similar occurrence of the illness has been recorded in Marshall County, where about 60 cases have been diagnosed but no deaths reported.

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DISCUSSION QUESTIONS

1. Why is immunization important for controlling diseases such as whooping cough?
2. Why does it seem that the level of immunization is low in certain areas of the United States?

Content	*Suggested Student Activities*
rest and maintenance of an adequate diet containing nourishing foods.	
Measles is caused by a virus which is carried in discharges from the nose and throat. Measles is a serious disease in infancy, but serious complications may occur at any age. A highly effective vaccine for measles has been developed and all young children should receive it.	Discusses why most infants are immune to measles during the first six months of life
German measles (rubella) is caused by a virus. If German measles occurs in a pregnant woman during the early months of pregnancy, it may cause brain damage to the child. A vaccine has been developed which provides immunity to German measles. Preadolescent children should receive the vaccine so as to increase general immunity in the population and to protect girls against German measles prior to reaching childbearing age.	Views films, such as *The Case Against Rubella.*
Mumps is caused by virus. Mumps can produce sterility in adolescent and post-adolescent males. A vaccine for mumps has been developed and preadolescent children should be immunized.	Reads and reports about the dangers of mumps when contracted after the age of 15.
Whooping cough is caused by a bacteria. Whooping cough is serious for young children, but it may be controlled by vaccination.	

CHRONIC AILMENTS ARE LEADING CAUSES OF DISABILITY AND DEATH

Content	*Suggested Student Activities*
Chronic or long-term illnesses usually refer to conditions that are not brought about by any known causative agent. These illnesses may develop because of a complete or partial breakdown of some body function.	Compares leading causes of death in 1900 in the United States with those of today, referring to data obtained from sources, such as the New York City Department of Health. Indicates reasons for the change in causes of death over the years.

Nation's Measles Cases for '70 Double Figure for Last 2 Years

By JANE E. BRODY

Measles, a disease that three years ago was thought to be on the verge of eradication, has begun an ominous climb.

The Center for Disease Control in Atlanta, a division of the United States Public Health Service, reports that thus far this year the number of reported measles cases is double the number of cases for the same periods in 1968 and 1969.

The increase, according to officials at the center, has occurred nationwide, in both urban and rural areas, although the poor urban areas account for the largest number of cases.

Nearly 39,000 cases were reported to the center in the first 32 weeks of this year, against nearly 19,000 in the comparable period in 1968.

Goal Still 'Way Off'

The number, of course, does not come anywhere near the 400,000 or so cases that were common in the years before measles vaccine. But, according to Dr. Shelby A. Wyll, immunization expert at the Atlanta center, the increase in measles this year clearly demonstrates that eradication of this serious childhood disease is "a long way off."

Dr. Wyll estimated that more than 10 million children would have to be vaccinated this year to approach an end to measles. But with public interest in the disease at an ebb and Federal funds for vaccine cut off, a big vaccination push in the near future is unlikely, he believes.

He noted, however, that while the Vaccination Assistance Act, which provided Federal funds for measles vaccine, expired in June, 1969, there were numerous other Federal agencies from which states could get funds for vaccine if they wanted to.

The "if" is a big one for several reasons, Dr. Wyll said. For one, most of the susceptible children live in ghetto areas and reaching them with vaccine is an expensive and difficult job, an effort that some persons find hard to justify in light of the many other medical problems faced by ghetto residents.

For another, most states do not require a child to have measles vaccination before entering school, and even states that do often do not enforce the regulation.

Measles vaccine, when it was licensed in 1963, was expected to do for this sometimes fatal and potentially brain damaging illness what the Salk and Sabin vaccines have done for polio—make even an isolated case a newsworthy event.

The vaccine, made from a weakened form of live measles virus, is believed to provide life-long immunity for all but 2 to 5 per cent of the children who receive it. It is best given right after a child's first birthday, after the immunity he may have acquired from his mother has waned.

A child who contracts measles, an illness characterized by a high fever and blotchy rash, runs a 1-in-10 risk of developing a serious complication such as pneumonia, bronchitis, ear infection or encephalitis. The ultimate result may be permanent brain damage, hearing loss or visual difficulties.

Since measles is caused by a virus, antibiotics are ineffective and there is no specific treatment for the illness.

When the measles season once again opens this winter, public health officials expect even more extensive outbreaks than those that marred the last measles season, which has just drawn to a close.

The last season saw serious outbreaks in Chicago, Los Angeles, Cleveland, Bergen County, N.J., and several other large urban areas.

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DISCUSSION QUESTIONS

1. What complications might result from measles?
2. Why are antibiotics ineffective against measles?
3. Why was there an increase in the incidence of measles in 1970 despite the availability of a vaccine?

Content	*Suggested Student Activities*
Such illnesses have become increasingly important in this country because many of the infectious diseases have been brought under control.	
A number of long-term illnesses may begin during young adulthood.	
Success in combating chronic diseases depends on cooperation among individuals, doctors, and health agencies.	Discusses reasons why chronic diseases require even closer patient-doctor cooperation than infectious diseases.
Important approaches for combating chronic illness include prevention, early detection, and rehabilitation.	
Prevention involves the practices of good health habits, such as nutrition, rest, exercise, and avoidance of harmful drugs.	Discusses relationships between health practices and chronic disease.
Early detection or recognition of disease is important if the benefits of prompt treatment is to be realized. Some chronic diseases lend themselves to screening tests, such as blood tests, urinalysis, electrocardiogram, X ray, etc., that help in early detection and treatment.	Discusses importance of an annual medical examination in order to detect chronic diseases. Indicates how more people could be encouraged to have regular routine medical examinations.
Rehabilitation may include adjustment to one's condition.	Indicates why patients with chronic diseases are frequently victims of medical quacks.
CARDIOVASCULAR DISEASES	
Cardiovascular diseases, the leading cause of death today, are responsible for more than half of the deaths each year, and the number seems to be increasing.	
Main types of heart disease include: Hardening of the arteries (arteriosclerosis) High blood pressure (hypertension)	Using material from the New York Heart Association as a source, reads and reports about main types of cardiovascular diseases.
Rheumatic heart disease	Discusses relationship between rheumatic fever and rheumatic heart disease.
Rheumatic fever remains the most common cause of heart disease in children. Rheumatic fever is caused by a streptococci infection or "strep throat." Strep infections occur mainly in children of ages 5-15. Rheumatic heart disease can be prevented if strep infections are detected and treated early.	Indicates why prompt medical attention is important for a streptococcal infection of the throat.

Content	Suggested Student Activities
Proper diagnosis of strep infection is made by a laboratory examination of throat smear.	
Most heart attacks are caused by blood clots forming in and obstructing coronary arteries.	
Factors that may reduce the risk of heart disease include: Proper diet Regular exercise Regular medical examination Avoidance of cigarette smoking Control of weight	Discusses importance of following good health habits at an early age as a means of reducing the risk of heart disease.
CANCER	
Cancer is the second leading cause of death today.	Views films, such as *The Traitor Within.*
Normal cell growth is characterized by order and control, i.e., cells become differentiated into skin, bone, and other tissues in a regulated manner.	
Cancer refers to an uncontrolled growth of cells which serve no useful function and interfere with the functioning of normal tissues and organs.	
Causes of cancer have not yet been determined. Medical research points toward several factors which include: Irritation of tissues from air pollution and cigarette smoking Radiation from the sun or X rays Chemicals, such as pesticides	Compares environmental factors with personal factors as causes of cancer.
Early diagnosis of cancer is important for many types of cancer may be controlled if they are detected early. The seven warning signals of cancer are: Unusual bleeding or discharge A lump or thickening in the breast or elsewhere A sore that does not heal Prolonged change in bowel or bladder habits Persistent hoarseness or cough Persistent indigestion or difficulty in swallowing	Prepares posters showing the warning signs of cancer.

Change in the appearance of a wart or a mole

The presence of one or more of the preceding symptoms does not mean that cancer has developed, but it is important to consult a physician when these early warning signs appear.

Treatments generally used in dealing with cancer are surgery, radiation, and chemotherapy.

DIABETES

Diabetes is a condition in which the body does not produce enough of the hormone insulin or when insulin is not used properly.

In diabetes, the body does not use sugar normally because of a deficiency in the production of insulin.

Early symptoms of diabetes include extreme thirst, loss of weight and strength, excessive urination, and excessive perspiration.

Detection of diabetes is made through urinalysis and special blood tests.

Control of diabetes may be achieved by proper diet, weight control, and exercise.

Treatment of diabetes may involve patient use of insulin injection at regular intervals.

With proper medical care and with personal attention to routines by the patients, an individual with diabetes can live a near normal life.

Views films, such as *Diabetes and You, Too.*

Participates in inviting the school nurse to report on the New York City Department of Health's Community Program for detection of diabetes and indicates the role an individual student could play in promoting this program.

DISEASE PREVENTION and CONTROL

Grade 11

Generalizations

INFECTIOUS DISEASE PROCESS INVOLVES CAUSATIVE AGENTS, MEANS OF TRANSMISSION, AND ENTRY INTO THE BODY. 148

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INFECTIOUS DISEASE PROCESS INVOLVES CAUSATIVE AGENTS, MEANS OF TRANSMISSION, AND ENTRY INTO THE BODY

Content	*Suggested Student Activities*
Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.	Writes about the following theme: What Good Health Means to Me.
Disease is any departure from good health or any condition in which normal body structure or function is impaired.	Finds out from the New York City Department of Health what the major health problems in the community are. Indicates what an individual can do to help eliminate these problems and what community agencies could assist in dealing with these problems.
Infectious diseases are caused by invasion of body tissues by disease-producing microscopic organisms (microorganisms) capable of producing injury.	Views films, such as *The Eternal Fight* or *Man Against Microbes.*
Not all infectious diseases are communicable. For example, appendicitis and tonsilitis are infectious diseases which are not transmissable.	Lists several diseases that are infectious but not communicable.
Communicable diseases are infectious diseases that are transmitted from one person to another, directly or indirectly.	Interviews school or family physician regarding the factors responsible for the decline of communicable diseases during this century. Makes a report of findings.
Disease-producing (pathogenic) microorganisms include viruses, rickettsia, bacteria, fungi, protozoa, and parasitic worms.	Reads and reports on the life requirements of microorganisms. Indicates how this knowledge helps in controlling communicable disease.
Viruses, the smallest of the disease-producing microorganisms, cause diseases, such as smallpox, polio, and the common cold. They can be seen only with an electron microscope.	Discusses why all viruses are considered pathogenic. Read and report about the discovery of the rickettsia organisms in the early 20th century.
Rickettsia, the next smallest microorganism, barely visible under the highest optical microscopes, are the cause of typhus fever and Rocky Mountain spotted fever.	Compares the virus with the rickettsia.
Bacteria, the lowest forms of plants, have three basic shapes.	
Rod-shaped (bacillus), the most numerous kind and the cause of tuberculosis	
Spherical-shaped (coccus), the cause of gonorrhea	
Spiral-shaped (spirillum), the cause of syphilis	
Fungi are plantlike organisms that include yeasts and molds. Athlete's foot is caused by a fungus.	

Fungus Disease Is a "Sleeping Giant"

WASHINGTON–A few years ago a group of archeology students became ill after digging in an old Indian burial site in California. The symptoms suggested a flu-like virus infection. The actual cause was a fungus in the soil.

Recently a similar outbreak among doctors and nurses was traced to contaminated plaster of paris in a patient's cast. Again, the villain proved to be, not a virus or bacterium, but a fungus.

Specialists, called mycologists, realize there is a whole world of disease in which fungi are the causes. Nonspecialists, laymen and doctors alike, are often largely ignorant of this world.

At an international meeting here last week one expert compared this disease problem to an iceberg–huge and largely hidden by man's ignorance, with only some peaks and crags visible and known.

Some of the most widespread of these diseases are minor–athlete's foot, for example, which may affect eight Americans out of every 10 at one time or another. Others are severe and occasionally fatal, their real numbers unknown because there is seldom any requirement to report them to public health officials and because their symptoms can mimic almost anything from tuberculosis to cancer or even insanity.

Widespread

The diseases are particularly widespread in Latin America–the conference was sponsored by the Pan American Health Organization–but some forms are also common in parts of the United States.

For example, one speaker said it is estimated that 40 million Americans alive today have had histoplasmosis, a fungus disease that can mimic such common afflictions as the common cold or flu. In more severe cases it can cause pneumonia.

One of the most potentially severe of the fungus infections is a type called cryptococcosis, which has a marked tendency to invade the central nervous system when the attack is severe. It can cause effects like those of tuberculosis, cancer, a brain tumor or even insanity.

Dr. Libero Ajello, of the National Communicable Disease Center, said doctors' failure to recognize this mimicry causes delays in proper diagnosis and treatment and, sometimes, may even lead to commitment of the patient to a mental institution.

The disease causes about 70 known deaths a year in the United States, but estimates of the total illness this infection causes are little more than guesswork. In only a very few states are doctors required to report the infections.

Another speaker said there have been cases in which the effects of a fungus infection in the lungs had been mistaken for lung cancer. The patients were subjected to surgery that might have been avoided if the proper diagnosis had been made in time. Fungus diseases, particularly histoplasmosis, are often mistaken for tuberculosis–a confusion that also may lead to incorrect treatment of the patient.

In general, the fungus-caused infections present a markedly different public health problem from the diseases caused by bacteria or viruses. There are only a few drugs effective in treating them, the doctors said–notably griseofulvin, which is taken by mouth for some of the minor skin infections, and the antibiotic amphotericin, which is given by direct infusion into a vein in serious cases of the infections that reach deep into the body.

Some severe cases of fungus infection may require surgery, even amputation of a limb. The much more common mild cases often go untreated or with roughly the mild supportive treatment that might be given for a common cold. The minor skin infections are often treated with an externally applied medication, but specialists differ on the effectiveness of these methods.

Public health preventive measures are also usually different for the fungus diseases than for others. Even though they may mimic flu or tuberculosis, these ailments are not ordinarily transmitted from person to person as virus and bacterial diseases are. Instead, the fungus diseases are often carried by dust, entering the body by inhalation.

–HAROLD M. SCHMECK Jr.

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DISCUSSION QUESTIONS

1. Why aren't most fungus diseases reported to public health officials?
2. Why do the fungus-caused infections present a different public health problem from diseases caused by bacteria or viruses?
3. How are fungus diseases usually transmitted?

Content	*Suggested Student Activities*
Protozoa, single-celled animals, are the cause of diseases, such as malaria and amebic dysentery.	
Parasitic worms, many-celled animals usually visible to the naked eye, include tapeworm, hookworm, and the trichina.	
For an infection to pass from a source or reservoir to a human being, disease-producing microorganisms must have a means of transmission and a means of entry.	
The usual means of transmission of disease-producing microorganisms include:	
Direct contact, with actual bodily contact with an infected person or natural source of infection by hand-to-body and hand-to-mouth contact, sexual intercourse, kissing, and the inhalation of air containing droplets of infected material.	Reads and reports about some common diseases that are spread by direct contact.
Indirect contact resulting from contact with contaminated articles, such as floors, food, water, clothing, utensils, or from contact with insects or animal carriers.	Discusses why it is more difficult to avoid diseases that are spread by indirect contact as opposed to direct. Discusses daily health habits that help to protect against acquiring infection.
Disease-producing agents may enter through body openings and/or broken skin.	

Imported Death

The discovery of the virus of Lassa Fever, which killed three of the first five Americans infected by it, is a sobering event. It is a reminder that even today's advanced medical science does not know all the virulent organisms nature has in its biological warfare arsenal. The list of such organisms can never be complete, if only because viruses are constantly mutating, and a mutant virus can pose dangers its parent stock did not. The happy note in the Lassa Fever story is that, once there was an individual who had recovered from that ailment, her blood could be and was used to provide antibodies that saved a subsequent victim.

Lassa Fever was first discovered among American medical missionaries in a remote Nigerian village. The disease was brought to this country in the body of a sick American who was transported to New York's Columbia-Presbyterian Hospital for treatment. The doctors involved were not aware that their patient harbored a hitherto unknown, but highly virulent, disease. As a result, two persons in this country contracted the ailment and one of them died.

This experience raises serious questions about the efficacy of the present regulations designed to safeguard the health of the American people against imported diseases. Surely there must be means of providing adequate medical care to Americans who fall ill abroad without risking the importation of new disease organisms that could produce deadly epidemics within the United States. The nation will count on the Public Health Service to draw from the lessons of the Lassa Fever case improved protective measures against future hazards of this sort.

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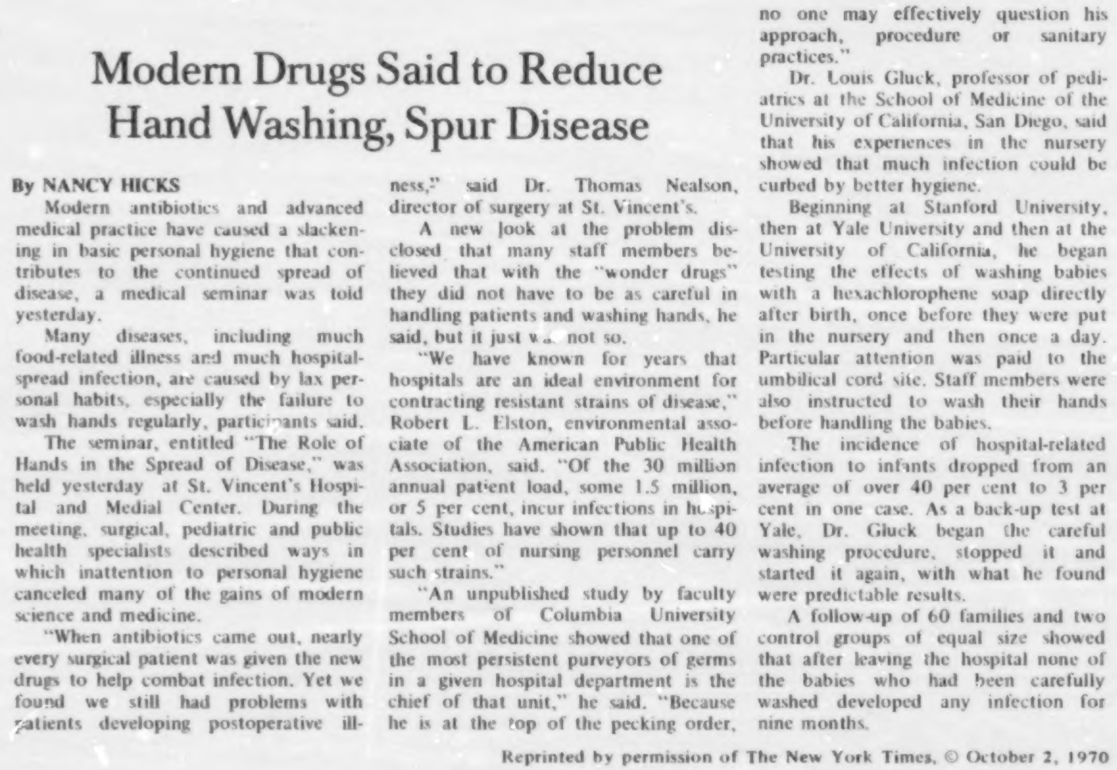
DISCUSSION QUESTIONS

1. Why may it be said that our fight against harmful microorganisms is a never ending battle?
2. What steps can be taken by our Public Health Service to prevent recurrence of the Lassa Fever story?



Modern Drugs Said to Reduce Hand Washing, Spur Disease

By NANCY HICKS

Modern antibiotics and advanced medical practice have caused a slackening in basic personal hygiene that contributes to the continued spread of disease, a medical seminar was told yesterday.

Many diseases, including much food-related illness and much hospital-spread infection, are caused by lax personal habits, especially the failure to wash hands regularly, participants said.

The seminar, entitled "The Role of Hands in the Spread of Disease," was held yesterday at St. Vincent's Hospital and Medial Center. During the meeting, surgical, pediatric and public health specialists described ways in which inattention to personal hygiene canceled many of the gains of modern science and medicine.

"When antibiotics came out, nearly every surgical patient was given the new drugs to help combat infection. Yet we found we still had problems with patients developing postoperative illness," said Dr. Thomas Nealson, director of surgery at St. Vincent's.

A new look at the problem disclosed that many staff members believed that with the "wonder drugs" they did not have to be as careful in handling patients and washing hands, he said, but it just was not so.

"We have known for years that hospitals are an ideal environment for contracting resistant strains of disease," Robert L. Elston, environmental associate of the American Public Health Association, said. "Of the 30 million annual patient load, some 1.5 million, or 5 per cent, incur infections in hospitals. Studies have shown that up to 40 per cent of nursing personnel carry such strains."

"An unpublished study by faculty members of Columbia University School of Medicine showed that one of the most persistent purveyors of germs in a given hospital department is the chief of that unit," he said. "Because he is at the top of the pecking order, no one may effectively question his approach, procedure or sanitary practices."

Dr. Louis Gluck, professor of pediatrics at the School of Medicine of the University of California, San Diego, said that his experiences in the nursery showed that much infection could be curbed by better hygiene.

Beginning at Stanford University, then at Yale University and then at the University of California, he began testing the effects of washing babies with a hexachlorophene soap directly after birth, once before they were put in the nursery and then once a day. Particular attention was paid to the umbilical cord site. Staff members were also instructed to wash their hands before handling the babies.

The incidence of hospital-related infection to infants dropped from an average of over 40 per cent to 3 per cent in one case. As a back-up test at Yale, Dr. Gluck began the careful washing procedure, stopped it and started it again, with what he found were predictable results.

A follow-up of 60 families and two control groups of equal size showed that after leaving the hospital none of the babies who had been carefully washed developed any infection for nine months.

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DISCUSSION QUESTIONS

1. According to this article, why has there been a laxity in basic personal hygiene in medical practice?
2. What causes drug-resistant strains of disease-causing microorganisms?
3. Why would hospitals provide "an ideal environment for contracting resistant strains of disease."?

PREVENTION AND CONTROL OF COMMUNICABLE DISEASE ARE RELATED TO SOURCE OF INFECTION, MODE OF TRANSMISSION, BODY RESISTANCE, IMMUNIZATION, AND CHEMOTHERAPY

Content

SOURCE OF INFECTION

It is possible to destroy or eliminate the source of infection for some communicable diseases as follows:

Animals that serve as sources of diseases such as rabies, bubonic plague, and bovine tuberculosis can be eliminated.

Isolation, the complete separation of infected persons from other persons during the infectious stage, serves to reduce and/or eliminate the source of infection.

Quarantine, the limitation of movement of persons who have been exposed to a communicable disease, and do not have the symptoms, may reduce and/or eliminate the spread of infection.

MODE OF TRANSMISSION

Community health measures have been developed which interfere with the transmission of disease-producing microorganisms. These measures incude:

Treatment and purification of water.

Inspection of animals to be used for human consumption.

Inspection of restaurants and food-processing establishments by the Department of Health.

Elimination of breeding places by appropriate spraying and proper disposal of garbage and other wastes.

Refrigeration and pasteurization of milk and proper cooking of certain foods.

Suggested Student Activities

Discusses how the immunization program in our country has made the need for isolation and quarantine less critical.

Participates in contacting the New York City Department of Health for information on enforcement of isolation and quarantine procedures, and in reporting findings to class.

Discusses the following statment: For 50 years, city and suburban dwellers have been taking pure, safe drinking for granted. But the situation is changing. Polluted water is causing a new and still not completely defined peril to human health.

Indicates factors contributing to water pollution and discusses how water pollution can be controlled.

Participates in inviting a representative from an industrial food company to discuss measures utilized to reduce the danger of food-borne infections.

Makes a report about the use of pesticides in controlling insect-borne diseases and the indiscriminate use of pesticides. Refers to resource materials obtainable from the United States Department of Agriculture.

Content	*Suggested Student Activities*
	Participates in consulting the New York City Department of Health in order to plan a "Starve a Rat" campaign in the community. Indicates student roles in such a campaign.
BODY RESISTANCE	
The body is provided with certain natural or built-in defenses which protect it from harmful microorganisms. These are structural, cellular, and chemical defenses.	Discusses factors which might influence severity of a disease and why one person might become seriously affected by exposure to disease organisms while another, exposed at the same time, might be slightly affected or might not even contract the disease at all.
Structural defenses include the following:	
The skin is the first line of defense against disease.	Evaluates the contention that the human species, through survival of the fittest, has developed improved defenses against disease.
Mucous membranes form a protective lining of body openings. The irritation of mucous membranes results in expulsion of microorganisms and other irritating substances.	
Tears wash microorganisms out of eyes; they also contain lysozymes which destroy many bacteria.	Reads and reports about the antibacterial action of lysozymes.
Acid in the stomach kills great numbers of bacteria which enter with foods.	
When infection does develop in the alimentary canal, it is often accompanied by vomiting and/or diarrhea which is the body's way of ridding itself of the invading microorganisms.	
Cellular defenses include tissues, white blood cells, and lymph.	
As tissues are destroyed by microorganisms, other cells form a wall which contain the infection and thus protect other parts of the body.	
White blood cells move to the infected area, surround it, and proceed to destroy microorganisms.	
Lymph clears infectious areas by carrying foreign materials to lymph nodes where they are filtered out and gradually destroyed and absorbed.	
Chemical defenses in the body involve antibodies which are substances in the blood that destroy or reduce the effects of disease germs, their toxins, or other foreign substances.	Discusses why antibodies may be considered a specific rather than general response to disease-producing agents. Indicates relationship between the rejection of transplanted organs and antibodies.

IMMUNIZATION

Content	*Suggested Student Activities*
Immunity is a condition of the body in which there is a high level of resistance to a particular disease.	Identifies some diseases to which the human species is naturally immune; i.e., an inborn trait which makes him highly resistant. Indicates why we are safe from most animal diseases.
Active immunity may be acquired naturally by having a particular disease and recovering, or artificially as a result of immunization. Active immunity is a condition in which the body has sufficient antibodies to overcome a particular disease agent if it enters the body.	Reports about the preparation of vaccines. Reads and reports about diseases in which an attack usually confers lasting immunity. Identifies diseases in which an attack doesn't provide lasting immunity.
Passive Immunity is developed in an individual by injecting antibodies produced by another individual or animal. Passive immunity provides high resistance immediately but generally does not have the longer-lasting protection of active immunity since foreign bodies are gradually rejected by the body.	Discusses why immune sera, such as gamma globulin, provides passive rather than active immunity.

CHEMOTHERAPY

Content	*Suggested Student Activities*
Chemotherapy, the treatment of infectious disease through the use of drugs is effective in the control of disease.	Reads and reports about contributions to chemotherapy by such scientists as Ehrlich, Waksman, and Fleming.
Sulfa drugs are derived from chemicals. The discovery of sulfa in the first half of this century was an important medical achievement in chemotherapy. Sulfa drugs are effective against some bacteria. Because of their possible side effects, sulfa drugs should be taken only on the advice of a physician.	Using an encyclopedia, or materials obtained from a pharmaceutical company (e.g., *Our Smallest Servants*), prepares a report about the preparation of sulfa drugs and antibiotics.
Antibiotics are derived from living organisms or are synthesized by chemical processes. Penicillin, the first antibiotic discovered, was originally produced from a mold. Other antibiotics which have been developed are streptomycin, aureomycin, bacitracin, and terramycin. Some important characteristics of an effective antibiotic include:	Discusses characteristics of an ideal antibiotic.

Content	*Suggested Student Activities*
An ability to control a wide spectrum of microorganisms	
An ability to act promptly and completely	
Many strains of bacteria have become resistant to penicillin and to other antibiotics.	Discusses why approximately 20 percent of patients with gonorrhea do not respond to penicillin treatment.
Frequent and/or unnecessary use of an antibiotic may sensitize an individual to the drug, thus making it ineffective at a later time when it is needed.	Participates in writing to the Food and Drug Administration for information about the precautions that must be taken before a drug is permitted on the market.
The search for new and better antibiotics must continue because changes in bacteria are occurring constantly.	

MEDICAL TRUANCY

New York City is now suffering a largely needless epidemic of measles. It could at any time experience equally unnecessary cases of diphtheria, polio and other preventable infectious diseases. The reason is that tens of thousands of children in this city have never had a full series of routine immunizations.

One indication of the magnitude of the problem is the fact that 500,000 immunizations are administered in the city's schools annually to students who had previously received incomplete protection or none at all. Yet there are 87 child health stations located throughout the city where the needed injections could be obtained free of charge if mothers only brought their infants in for this purpose.

City health officials openly confess their frustration and perplexity at this medical truancy. They report that the response is quite low even when mothers who have no pediatricians are invited to bring their children to the nearest health station for free examination and immunization.

Ideally, these mothers ought to be sought out in their homes and persuaded to take advantage of the existing facilities. But the staff available for this is grossly inadequate, and–given existing budgetary problems–is unlikely to be expanded soon. The alternative, which ought to be pursued vigorously, is a campaign of information and education in each of the city's neighborhoods where this problem exists.

Community leaders and groups looking for a concrete activity to benefit their neighbors could be enrolled in this effort. Meanwhile the health stations continue to function and any parent wanting information about free immunization can call DI-9-2255 for help.

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SUGGESTED CHILD IMMUNIZATIONS

Age	*Immunization*
	PRIMARY SERIES
6 weeks	D.P.T. (diphtheria, pertussis and tetanus, combined) and polio.
12 weeks	D.P.T. and polio.
18 weeks	D.P.T. and polio.
12 to 15 months	Measles and rubella, given separately, at one month intervals.
	BOOSTER SERIES
18 months	D.P.T. and polio.
3 to 6 years	D.P.T., polio and smallpox.
12 years	D.T. (diphtheria and tetanus, combined).
Every 10 years	D.T.

These are times recommended by the City Health Department when the series is begun in early infancy. Slightly different schedules and intervals are recommended when the series is bugun in late infancy (older than 6 months) or after sixth year. Medical opinion on these schedules is divided, and some private physicians may follow different timetables.

CLASS ACTIVITY

Plan a community action program to encourage parents to have their children immunized.

INFECTIOUS DISEASES REMAIN AN IMPORTANT CONCERN FOR THE COMMUNITY DESPITE MODERN ADVANCES IN MEDICAL SCIENCE

Content

There are still some important infectious diseases that continue to remain a problem in the community.

VENEREAL DISEASES

The incidence of venereal diseases has increased progressively in the United States since 1957.

At the present time, the incidence of both syphilis and gonorrhea far exceeds the incidence of diseases, such as polio, typhoid, diphtheria, and smallpox.

The venereal diseases, syphilis and gonorrhea, can be controlled by early identification and treatment of infected persons.

Syphilis is a communicable disease caused by the spirochete, a corkscrew-shaped bacteria. The spirochete does not survive outside the human body.

Syphilis is spread by heterosexual or homosexual contact with an infected person.

There are three stages of syphilis:

Primary Stage, in which the symptoms of syphilis appear about 21 days after contact. Symptoms consist of a painless sore or chancre which appears on the penis, in or around the vagina, the arms, or on the lip or tongue. Primary signs disappear within several weeks, even if untreated.

Secondary Stage, in which the symptoms usually appear in about four to six weeks after the appearance of the first lesion. They consist of a rash on any part of the body, fever, loss of hair, and sore throat. These secondary symptoms may last from a few weeks to several months and may recur for a period as long as two years, if untreated. The most infectious period for syphilis is during the primary and secondary stages.

Suggested Student Activities

Views films, such as *Dance Little Children*.

Discusses reasons for the extremely high rate of venereal disease in large cities.

Prepares a class display of illustrative materials (books, posters, leaflets, etc.) about the subject of venereal disease.

Participates in inviting a speaker from the Venereal Disease Control Unit of the New York City Department of Health to talk about identification and dangers of self-diagnosis and treatment.

Discusses implications of New York State Public Health Law which permits a licensed physician to diagnose, treat, or prescribe for a case of venereal disease in a person under the age of twenty-one without the consent or knowledge of the parent or guardian.

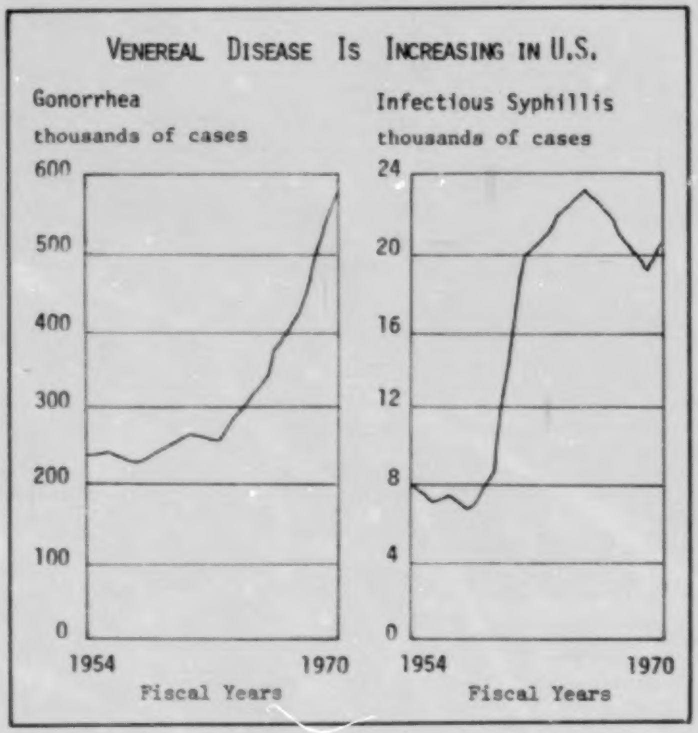
Discusses the misconception that syphilis can be transmitted through contact with contaminated articles.

Indicates why people may be lulled into thinking that their syphilis is cured when the sores disappear.

Discusses how a pregnant woman with syphilis can pass this disease to her unborn baby.

Venereal Disease Rising. Many U.S. Young Affected.

By JANE E. BRODY



Gonorrhea, a disease once thought under control, is rampaging through the country, crossing socio-economic lines, making inroads into suburbia and afflicting an overwhelming proportion of youngsters.

The alarm of public health officials over what they regard as a nationwide epidemic of gonorrhea is paralleled somewhat by an increase in the number of reported cases of syphilis in all but one section of the country during the first four months of this year. Syphilis has been on the decline for the last five years and many officials expected this decline to continue.

With more than one and a half million new cases each year, venereal disease is the nation's most common communicable disease, except for the common cold. The reported incidence of gonorrhea is rising at a progressively higher rate, 15 per cent in the last year and more than 200 per cent in some large cities.

In a survey of 30 major American cities conducted by The New York Times, public health officials attributed the rise in gonorrhea to relaxed sexual morality; increased promiscuity, especially among youngsters; abandonment of the condom, which offers some protection against infection, for the birth control pill; greater mobility of the population; general ingorance; lack of cooperation by the medical profession; insufficinet funds to trace cases, and ostrich-like behavior on the part of victims who refuse to name their contacts and educational institutions that oppose the teaching of V.D. prevention in the schools.

In some cities, the increase in V.D. has been attributed in part to better reporting of cases to the public health authorities. (Studies have shown that the actual incidence of V.D. is four times the number of cases that are reported.) But most officials interviewed were sure that more and more people are being infected at younger and younger ages.

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DISCUSSION QUESTIONS

1. Why is it particularly difficult to identify and treat women who are infected with gonorrhea?
2. How would better reporting of gonorrhea cases help to reduce the incidence of this disease?
3. Why has there been a rise in the rate of gonorrhea?

Content	*Suggested Student Activities*
Latent Stage, in which the syphilis may appear to be dormant for 5-25 years before damage becomes apparent. Following months or years of latency, syphilis, if untreated, may result in permanent damage to the central nervous system and the heart. Paralysis, insanity, or death may also occur. Although late syphilis is not usually infectious, the disease may still be transmitted to a fetus by an infected mother.	Discusses how syphilis can be diagnosed in the latent stage so as to prevent congenital syphilis.
Diagnosis for syphilis is made through a blood test (Wassermann test) or a spinal fluid test.	Reads and reports about the development of the Wassermann test.
Modern treatment of syphilis is very effective. Penicillin is the drug most often used; however, other antibiotics may be used because of the allergic responses of some persons to penicillin.	Views films, such as *The Innocent Party*. Discusses why some people might seek out quacks for treatment of venereal infection.
Treatment cannot restore tissues or cells that have been destroyed; therefore the earlier the disease is treated, the less chance there is of permanent damage.	
Gonorrhea is a communicable disease caused by the gonococcus, a spherical bacterium.	
Gonorrhea is spread by contact with infected area of an infected person.	
In the case of an infected mother, gonorrhea may be transmitted to a newborn infant during its passage through the birth canal.	
Silver nitrate or penicillin is routinely administered to the eyes of newborn infants to prevent infection.	
The symptoms of gonorrhea differ somewhat in the male and female.	
In the male, there is a pus discharge from the penis which usually lasts 2 to 5 days after exposure. It is accompanied by painful urination.	
In the female, symptoms are less clearly evidenced and therefore the disease is undetected until it has caused serious body damage.	Discusses reasons which account for the fact that females infected with gonorrhea may more readily spread the disease.
The diagnosis of gonorrhea is made by a medical examination consisting of a laboratory examination of pus discharge (smear test).	Indicates why blood tests are rarely used for the diagnosis of gonorrhea.
Treatment for gonorrhea is effective with	Reacts to the following statement: The germs causing gonorrhea aren't half as resistant to the

Content	Suggested Student Activities
penicillin or alternative antibiotics. If gonorrhea is untreated, it may cause sterility, blindness, arthritis, heart trouble, or sometimes death.	drugs as patients are to instruction on prevention. Physicians are plagued by "repeaters" who contact gonorrhea several times a year. Visits the United Nations. Reports about the role of its health agencies in the area of venereal disease.
INFECTIOUS MONONUCLEOSIS	
Infectious mononucleosis (glandular fever), is a viral disease, often referred to as the "student disease" or "kissing disease."	
The diagnosis of mononucleosis is sometimes difficult because the symptoms are similar to those of other diseases.	Indicates why infectious mononucleosis is sometimes referred to as "a great masquerader."
Symptoms usually consist of a fever, sore throat, swelling of the lymph glands, and a loss of energy.	Discusses the significance of the following statement: In treating mononucleosis, antibiotics such as penicillin may control secondary infections, if any, but have no effect on the primary disease.
Recovery from mononucleosis usually takes about two or three weeks with proper rest and diet.	
TUBERCULOSIS	
Tuberculosis is classified as a communicable, and usually chronic disease.	
The infecting agent of tuberculosis is the tubercle bacillus, a type of bacteria.	
Once the tubercle bacillus enters the body, it can affect any part, such as bones, kidneys, and adrenal glands.	
In most cases, however, the affected organs are the lungs, and the disease is called pulmonary tuberculosis.	
Antibiotics, such as streptomycin, in combination with drugs like isoniazid have made the treatment of tuberculosis effective.	Reads and reports about the use of the drug isoniazid in the preventive treatment of tuberculosis.
These drugs render the tuberculosis patient noninfectious to others and thus make it possible to treat the disease safely at home.	Discusses reasons for the gradual disappearance of tuberculosis sanitariums.
A major problem in the control of tuberculosis is to find the still undiscovered cases and bring them under proper treatment.	
The tuberculin test is used mainly in case-finding programs in schools.	Discusses the importance of the tuberculin-testing programs in schools.

In giving a test for tuberculosis a small amount of tuberculin, a liquid which does not contain any bacilli living or dead, is introduced on the skin.

A tuberculin-positive reaction indicates that the tubercle bacilli must at some time have entered the body.

A person who does not react to the tuberculin test is said to be tuberculin negative.

An X ray is used to follow up tuberculin-positive reactions to determine if the infection is active or has healed.

HEPATITIS

Infectious hepatitis is a serious infection of the liver which has increased markedly in the United States.

Infectious hepatitis is a viral disease commonly found among children and young adults.

This disease is usally transmitted through water, milk, shellfish, or other foods contaminated by human waste containing the infectious hepatitis virus.

The symptoms of this disease are fever, nausea, abdominal distress, and enlargement of the liver.

There is no specific treatment for infectious hepatitis. Most patients recover with bed rest and proper diet.

Serum hepatitis is another form of hepatitis which may be spread through the blood of an infected person or by needles and other instruments that have been contaminated.

Nine out of ten cases of serum hepatitis follow blood transfusions and can be traced to the use of "commercial blood."

Participates in contacting the Department of Health to obtain information about the prevention of serum hepatitis.

Discusses why hepatitis is sometimes the cause of death among drug addicts.

GERMAN MEASLES (RUBELLA)

If German measles, a viral disease, occurs in a pregnant woman during the early months of pregnancy, it could cause serious birth defects in the child.

The Young Lords Seize X-Ray Unit

Take It to Area Where They Say It Is Needed More

By ALFONSO A. NARVAEZ

Members of the Young Lords Party walked up to a mobile chest X-ray unit yesterday at 116th street and Lexington Avenue, seized it and moved it to another site in East Harlem.

The Young Lords, a Puerto Rican activist group, charged that the unit was functioning only part-time throughout the city and that it was needed to serve the needs of the Puerto Rican people. The X-ray unit, leased by the city's Health Department, is used to seek out cases of tuberculosis.

Technicians assigned to the truck went along with the move and continued to take X rays.They said that there was more activity at the new site, 111th 'Street and Madison Avenue, across the street from the Young Lords' headquarters.

"We were forced to take this move," said Pablo Yoruba Guzman, minister of information for the Lords, because "the city has refused to help us in our back-up program in tuberculosis examinations."

In the last three months, he said, the Lords have conducted a door-to-door TB detection program, examining more than 900 people in East Harlem and finding positive reactions in one out of three tests.

A positive reaction does not necessarily mean there is active TB, and a Health Department spokesman said the tuberculosis rate in East Harlem was 68 cases for every 100,000 people–about double the rate outside the city's poorer neighborhoods. The national average, he said, is 21 for every 100,000.

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DISCUSSION QUESTIONS

1. How will an X-ray program reduce the incidence of tuberculosis in East Harlem?
2. Why is the incidence rate for TB in this community almost three-times the national average?
3. How do you feel about militant groups such as the Young Lords, getting involved in important health problems?

Vaccine Reduces Rubella

German measles vaccine appears to be reducing the incidence of the disease in states where the vaccine is widely used, the National Foundation-March of Dimes said today.

Dr. Virginia Apgar, the foundation's vice president for medical affairs, said nine out of ten states with "high vaccine coverage" have reported reduced incidence [of German measles]. Eight of ten states with poor coverage, she said, reported increases.

"While the data are not yet conclusive," Dr. Apgar said, "they do offer encouragement that widespread use of the vaccine among children may ultimately eliminate the disease as a threat to unborn babies."

The federal government began a $50-million campaign last summer with the aim of vaccinating 40 million to 60 million children between the ages of 1 and 12.

Women are not being directly vaccinated because doctors fear infecting a woman who may be pregnant and not know it.

Thousands of birth defects resulted from the last epidemic of German measles–also called rubella or three-day measles–in 1963-1965.

Because German measles run in cycles, there could be another epidemic in 1971-73. The hope behind the vaccination campaign is to minimize its effects.

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DISCUSSION QUESTIONS

1. Why are certain states responding poorly to the need for vaccine coverage?
2. What precautions are necessary in considering the rubella vaccination for women?

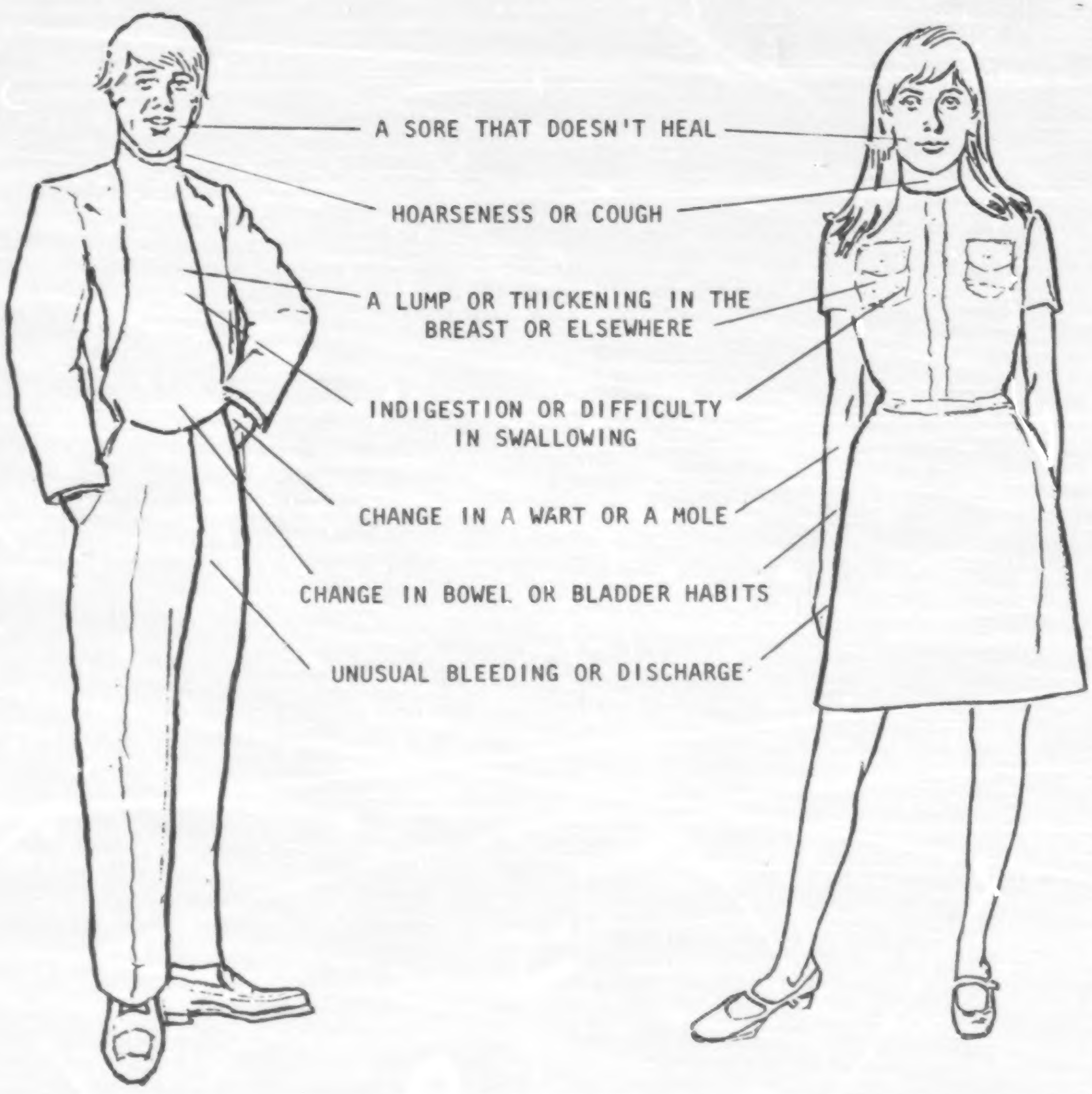
Content	*Suggested Student Activities*
Preadolescent children should receive the German measles vaccine so as to increase general immunity in the population and to protect females against the disease prior to reaching childbearing age.	
MUMPS	
Mumps is a viral disease which can produce sterility in adolescent and postadolescent males.	
Preadolescent children should receive mumps vaccine in order to increase general immunity in the population.	
INFLUENZA	
Different types of influenza are carried by viruses of different strains.	
Influenza is spread mainly through nose and throat discharges of infected individuals.	
Vaccines have been developed for prevention of some strains of influenza.	Discusses why available influenza vaccines were ineffective in the Asian Flu epidemic of the late 1950's.
ATHLETE'S FOOT	
Athlete's foot is a fungus infection which results in scaling and cracking of the skin, especially between the toes.	Discusses why usual sources of athlete's foot infection are on the floor of locker rooms, shower stalls, and swimming pools.
Once this infection takes hold, it is difficult to cure.	
The following practices may be beneficial in preventing fungus diseases: Use well-ventilated shoes during warm weather to reduce foot moisture. Change socks and shoes frequently if the feet perspire profusely. Dust feet with talcum powder to help keep them dry.	

CHRONIC AILMENTS ARE IMPORTANT CAUSES OF DISABILITY AND DEATH

Content	*Suggested Student Activities*
Chronic illnesses result from an abnormal condition or abnormal functioning of one or more organs in the body.	Identifies some health practices that might reduce the incidence of chronic diseases in later years.
In many chronic illnesses, early symptoms are slight, gradually increasing in severity.	Discusses importance of the annual medical examination in prevention and control of chronic diseases.
Chronic illnesses can be controlled if individuals take personal responsibility for their prevention and treatment.	
Although chronic diseases are more prevalent in older age groups, certain practices may be followed by young people to reduce the incidence of disorders in later years.	
Chronic diseases are usually difficult to arrest if detected in advanced stages.	
Early detection is the most effective safeguard against the development of a serious chronic disease. Under medical supervision, some individuals with chronic diseases lead near-normal lives.	
CANCER	
Cancer is a disorderly and uncontrolled growth of cells of the body.	
In normal cell growth, the rate of cell division is controlled and new cells form useful tissues and organs.	Views films, such as *From One Cell.*
In abnormal cell growth, as in cancer, the cells do not develop into useful tissues or organs.	
Cancer cells ordinarily do not stop multiplying once they start.	
Masses of cells that result from abnormal cell growth form tumors or swellings. Types of tumors are as follows:	Discusses why it is important to watch for changes in warts or moles.
Benign tumor—a usually harmless lump of useless cells enclosed in a covering, or capsule, which localizes the abnormal growth.	
Malignant tumor or cancer—cells which may spread through the body by way of the circulatory or lymphatic systems. The spread of malignant cells is known as metatasis.	
Early detection of cancer while the growth is still localized is essential if a cure is to be effected.	

Content	*Suggested Student Activities*
Causes of cancer are still unknown. However, repeated injury or chronic irritation of tissue seem to produce cellular changes that stimulate abnormal growth.	Reads and reports on "New Clues in the Virus-Cancer Mystery." (*Today's Health*, June 1970).
Types of irritation which may produce cancer follow:	Views films, such as *Is Smoking Worth It?*
Mechanical, such as prolonged irritation of warts or moles on the skin, of the mouth by ill-fitting dental plates, or of the lips by the stem of a pipe.	
Chemicals, such as coal tars, aniline dyes, and arsenical compounds (carcinogenic agents)	
Thermal, resulting from repeated burning of areas of the skin and lips.	
Actinic, caused by the effects of prolonged exposure to ultraviolet rays from the sun.	
Radioactive, resulting from prolonged exposure to X rays or the radioactive emanation from radiums or radioisotopes.	
While there is no definite evidence that cancer is inherited, there is some evidence that susceptibility to cancer may be inherited.	
Signs of cancer are difficult to detect in its early stages because there is generally no pain or characteristic set of symptoms. The following signs should be heeded:	Views *Jennie*, a filmstrip on breast self-examination. Participates in inviting a physician from the school medical service or the county medical society to lead a discussion on this filmstrip.
Unusual bleeding or discharge	
A lump or thickening in the breast or elsewhere	Reads and reports on "Breast Cancer: The Search Goes On" (*Today's Health*, July 1968).
A sore throat that does not heal	Using a chart of the human body, identifies common sites of cancer.
Change in bowel or bladder habits	
Hoarseness or cough	
Indigestion or difficulty in swallowing	
Change in a wart or mole	
Prompt action by individuals is important when danger signals are noted. The best prospects for a cure occur when a localized growth is treated.	
Annual health checkups are vital to detecting growths early. Such examinations may facilitate discovering benign or malignant tumors.	

DANGER SIGNS OF CANCER


A SORE THAT DOESN'T HEAL
HOARSENESS OR COUGH
A LUMP OR THICKENING IN THE BREAST OR ELSEWHERE
INDIGESTION OR DIFFICULTY IN SWALLOWING
CHANGE IN A WART OR A MOLE
CHANGE IN BOWEL OR BLADDER HABITS
UNUSUAL BLEEDING OR DISCHARGE

Content

Treatment of cancer includes surgery, radiation, and chemotherapy:

Surgery involves complete removal of the tumor, including surrounding tissues into which the cancer may have extended.

Radiation from X rays or radioactive isotopes is used to destroy cancer cells.

Chemotherapy is used when the cancer is no longer localized and has spread through the body.

In recent years, drugs have been developed that are temporarily effective in the treatment of cancer.

In some cases, drugs can produce cures. In most cases they temporarily stop the growth of certain cancers, relieve pain, and allow the patient to live a longer, more comfortable life.

Success in the treatment of cancer depends upon early recognition, early and accurate diagnosis, and prompt treatment.

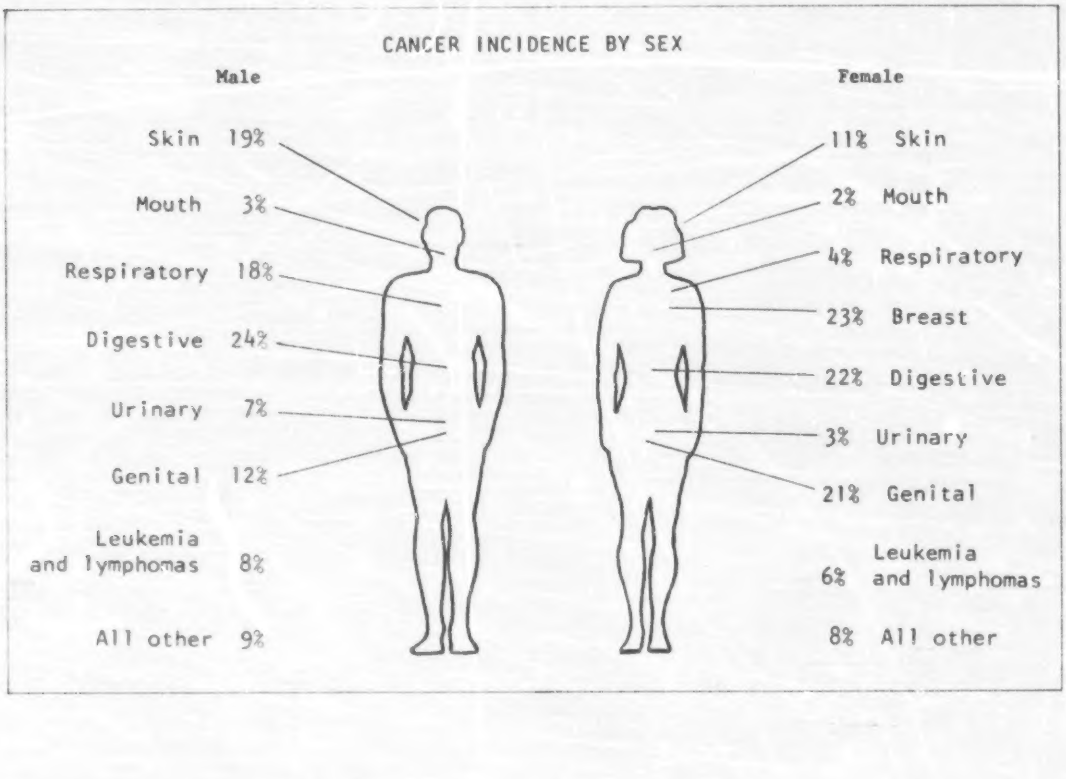
Suggested Student Activities

Reads and reports on, "Using the Cancer Cures We Have Now" (*Today's Health*, April 1970).

Views films, such as *The Traitor Within.*

Reads and reports about Public Health Service publication, *Treating Cancer.*

Using films, such as *Time and Two Women*, disucsses the importance of Pap Test as part of the annual health checkup. (Note: Film restricted to girls.)



LEUKEMIA

Content	*Suggested Student Activities*
Leukemia, often referred to as blood cancer, is a disease affecting the white blood cells.	Reads and reports about "Leukemia: We're Starting to Use the Word Cure" (*Today's Health*, October 1970).
Leukemia originates in the lymph glands or the bone marrow where the white-cell-forming centers produce more-than-normal quantities of white blood cells.	
The cause of leukemia is unknown, but recent studies indicate that a virus may be involved.	

CARDIOVASCULAR DISEASES

Content	*Suggested Student Activities*
When any part of the circulatory system is impaired, the body cells may be deprived of blood supply.	Reads and reports about the Public Health Service publication, *Heart Disease.*
If cells are without blood for a sufficient period of time, damage will probably occur. Damage may take place in the heart, brain, lungs, kidneys, skin, or any other part of the body.	
Among the cardiovascular diseases are congenital heart defects, rheumatic heart disease, hypertensive heart disease, and arteriosclerosis.	
Congenital heart defects may involve the structure of the septum dividing the heart chambers or malfunction of the aorta or pulmonary artery, or poorly functioning heart valves.	Reads and reports about "Heart Murmur: What Does It Mean" (*Today's Health*, February 1968).
There are 30,000-40,000 children born each year in the United States with congenital heart defects.	
Advances in heart surgery and use of the heart-lung machine for open heart surgery have made correction of many congential heart defects possible.	Using an encyclopedia as a resource, reads and reports about the use of heart-lung machine in open heart surgery.
Rheumatic heart disease, or valvular heart disease, is the most common cause of heart problems in young people.	
The most common cause of rheumatic heart disease is rheumatic fever which occurs in many people during a streptococcal infection such as "Strep" throat, scarlet fever, tonsillitis, and middle-ear infections.	Interviews a physician about the effects of valvular damage on an individual as the result of a streptococcal infection.
It is important that any sore throat, ear infection, or other possible streptococcal infections be treated by a physician without delay.	

Content	*Suggested Student Activities*
Heart valves damaged by rheumatic fever can often be repaired by surgery.	Reads and reports about the use of nylon or dacron heart valves.
Hypertensive heart disease, that is hypertension or high blood pressure, is the most prevalent heart and blood vessel disease today.	Reads and reports about the National Heart Institute publication, *Hypertension.* Reads and reports about relationships of emotional tension to high blood pressure.
Defects which result from this condition are not in the heart but in the blood vessels.	
Blood vessels become constricted requiring the heart to exert more pressure and work harder to circulate the blood.	
High blood pressure is usually associated with middle-aged and/or older people. However, it is not uncommon to find the condition in young people.	
Hypertension is easily detected in a routine physical examination.	Interviews school nurse or physician on the question: "How is hypertension diagnosed?" Reports to class.
Although the cause of most cases of hypertension is unknown, the following measures can be taken to keep the problem under control:	Interviews school psychologist on the question: "How is hypertension related to inner stress?" Reports to class.
Avoid overweight	
Make necessary changes in diet	
Avoid stress	
Use drugs only under medical supervision	
Arteriosclerosis, or hardening of the arteries, is a leading cause of death in older people, but it may develop much earlier in life.	Reads and reports about the use of an electrocardiogram in diagnosing heart disease. Using *Hardening of the Arteries* as a reference, reports about arteriosclerosis as a causative factor in heart attacks.
In some cases of arteriosclerosis the blood vessels become constricted; in other cases, there is a deposition of a fatty substance called cholesterol on the inner walls of arteries.	
Although the cause of arteriosclerosis is not known, high fat diets, emotional stress, excessive smoking, and too little exercise appear to be contributing factors.	
Heart attacks occur when a part of the heart is denied an adequate blood supply.	
Heart attacks may occur when the following conditions are present:	
The flow of blood through a narrowed and roughened coronary artery is blocked by a clot which lodges there (coronary thrombosis).	

Content

The blood flow through a narrowed and roughened coronary artery is blocked without a clot (arteriosclerosis).

Fatty deposits become so enlarged that they shut off the flow of blood (atherosclerosis).

When the heart's life supply of blood is shut off, that portion of heart muscle normally fed by the blocked artery will be damaged or die.

The seriousness of a heart attack depends on the size of the blocked vessel and the extent of heart muscle area damaged by blood starvation.

Symptoms of heart attack may include pain in the chest, shortness of breath, and heavy perspiration.

Only a physician can diagnose a heart attack, usually by blood pressure studies and an electrocardiograph.

Most patients recovering from a heart attack require rest and a gradual return to normal physical activity.

Although our knowledge of how to prevent coronary heart disease is limited, some of the risk factors known to be related to the development of this disease include:

High cholesterol level in the blood
High blood pressure
Overweight, or obesity
Cigarette smoking
Lack of physical activity
Certain types of chronic emotional stress

There are risk factors over which some measure of control can be maintained by the individual and/or which can be treated medically. Measures to reduce these risk factors should be followed early in life under the supervision of a physician.

Strokes (apoplexy) are not necessarily a problem of old age.

Some strokes are caused by a blood clot in an artery narrowed by fatty deposits. Other strokes are caused by a hemorrhage from an artery in the brain.

Brain cells in the area involved cease to function, and the body regions they control may become paralyzed.

Suggested Student Activities

Discusses factors that determine the seriousness of a heart attack.

Using *Cerebral Vascular Disease and Strokes* as a resource, reports about how high blood pressure may be an underlying cause of strokes. Indicates why a stroke often results in paralysis.

After a stroke, the damaged nerve cells in the brain may recover or their functions may be taken over by other brain cells.

Through physical therapy, a patient can learn to use the muscles affected by a stroke.

EPILEPSY

The cause of epilepsy may be an injury, a growth, an inflammation, or poor blood supply to the brain.

Epileptic seizures are mainly of three types:

Grand mal, or major epilepsy, where seizures are severe, consisting of convulsions.

Petit mal, or minor epilepsy, where seizures are less severe but occur more often in the form of a short "black-out."

Psychomotor seizures which consist of episodes of mental confusion.

Nothing can be done to stop an epileptic seizure once it has started. Ordinarily the attack will be over in a few minutes.

In a grand mal seizure, it is important not to interfere with the person's convulsive movements, but only to protect the individual from injuring himself through falling or striking an object.

With new medications, physicians can now control epileptic seizures in some patients.

Reads *Epilepsy: Hope Through Research* and reports about the importance of recording brain waves in the diagnosis of epilepsy.

Using *First Aid* (American National Red Cross) as a reference, discusses first aid care for individuals having severe epileptic seizures.

Discusses student attitudes toward a classmate after his recovery from an epileptic seizure.

Indicates why some states have laws which prohibit epileptics from driving.

CEREBRAL PALSY

Cerebral palsy is a group of ailments with a variety of symptoms, but all are brain-centered and all affect muscular control.

Cerebral palsy may be caused by:

German measles early in pregnancy

A blood-type conflict between mother and unborn child

Other ailments (i.e., anemia, toxemia) which may occur if mothers eat improperly.

Careful medical attention throughout pregnancy and delivery can prevent some cases of cerebral palsy.

Using *Cerebral Palsy* as a resource, prepares a report dealing with current research relative to this disease.

Content	*Suggested Student Activities*
Children with cerebral palsy should be given special treatment to reeducate paralyzed muscles and restore control in the brain.	
MUSCULAR DYSTROPHY	
Muscular dystrophy is a progressive wasting of muscles or destruction of muscle fiber. An inherited characteristic may be the cause for this disease. Although no cure has been found for muscular dystrophy, physical therapy often bolsters the delaying fight against weakness and crippling.	Using *Muscular Dystrophy*, prepares a report on nature of this disease as well as current research.
MULTIPLE SCLEROSIS	
Multiple sclerosis is a disease affecting the central nervous system. The cause of multiple sclerosis is unknown, and there is neither a known cure nor fully effective treatment. Many people with mild or even moderately severe cases live normal lives and work regularly for years. Physical therapy and other forms of rehabilitation help some people to regain lost skills.	Using *Multiple Sclerosis*, prepares a report about the nature of this disease as well as the current research. Plans a class activity for the purpose of helping those afflicted with multiple sclerosis.
GENETIC DISEASES	
The cause of genetic diseases lies in the genes, the tiny units of heredity that are present in each body cell and are a virtual blueprint of what a baby will and will not inherit from parents or ancestors. An individual who has one gene for a hereditary disease will show a positive result on a screening test but will not necessarily have the disease. Screening tests for genetic diseases should not be undertaken until careful thought is given to such matters as protecting those tested from psychological or social damage. An educational program is important so that people understand the medical implications of a positive result. Test results should be kept confidential to protect the privacy of individuals and families.	Discusses, importance of having well-trained genetic counselors available to assist all those with positive traits for genetic diseases.

Content	*Suggested Student Activities*
Genetic diseases seem to affect certain groups. Cooley's anemia affects Italians; sickle cell anemia, African Negroes; Tay-Sachs disease, Jews with Far Eastern European ancestors.	
Cooley's anemia is a genetic ailment involving a deficiency of red blood cells. It mainly affects natives or descendants of natives of Mediterranean lands (Italians, Greeks, etc.).	
Sickle cell anemia, an incurable, and hereditary disease of hemoglobin, occurs almost exclusively in Negroes.	Writes to Foundation for Research and Education in Sickle Cell Disease (423 West 120 Street, New York, N.Y. 10027) for further information about this disease.
Sickle cell anemia results in an abnormality in the formation of hemoglobin, causing red blood cells, deprived of oxygen, to change from their normal round shape into crescent or sickle shapes. These sickle cells clog blood vessels, resulting in strokes.	Contacts New York City Department of Health Center in the community for information about the sickle cell anemia screening program. Reads and discusses *Questions and Answers About Sickle Cell Anemia.*
The disease occurs in almost one of every 500 Negro births. Approximately 10 percent of the Negro population are carriers; that is, they have one gene for sickle cell anemia.	Participates in preparing a community action program to publicize the importance of a blood test to detect the hereditary tendency for sickle cell anemia.
Unlike many other hereditary diseases, sickle cell anemia may be detected by a simple blood test. Through administration of this blood test, a young couple would know beforehand the possibility of their children having sickle cell anemia.	Views filmstrip, *Sickle Cell. . . An Inherited Disease.*
Tay-Sachs disease is a rare hereditary disorder causing destruction of the nervous system. Children with this disease will die before they reach age five.	Writes to the National Tay-Sachs and Allied Diseases Association (200 Park Avenue South, New York, N.Y. 10003) for more information about this disease.
A family's chances of having a Tay-Sachs child are greatest if they are of Jewish heritage with an Eastern European ancestry. The chance that a Jewish man or woman is a carrier of the Tay-Sachs trait is approximately one in thirty.	
A simple blood test can identify carriers of the Tay-Sachs trait. The disease can also be detected by special testing at birth or in the fetus as early as the sixteenth week of pregnancy.	

EMPHYSEMA

Emphysema is a degenerative disease of the lungs which usually develops over a period of years.	Compares emphysema with chronic bronchitis.
Emphysema occurs most frequently in middle-aged	Discusses the personal and/or environmental factors that might be responsible for the

or older people, but it may also appear in young people who have chronic lung infections, asthma, or chest deformities.

The most characteristic symptom of emphysema is shortness of breath.

In emphysema, the alveoli, the air cells in lungs, become overinflated, distended, and ruptured.

The cause of emphysema is unknown but it is often associated with chronic bronchitis and is much more prevalent among heavy smokers.

Prevention is best accomplished by treating cases of influenza, bronchitis, and other respiratory-tract infections thoroughly and promptly.

Anyone who has a chronic cough should stop smoking, as it may be a warning of emphysema in its early stage.

ALLERGIES

Allergy is a sensitivity which some people develop to substances which are ordinarily harmless to most other people.

Allergies cause an impairment of efficiency and, in some cases, may bring about a severe disability.

Although causes of allergies are not clearly understood, there may be some hereditary tendency or predisposition, and there may be some emotional basis.

Substances responsible for allergic reactions are called allergens.

Allergens may be taken into the body in the following ways:

Breathing (dust, feathers, and pollen)

Eating (tomatoes, strawberries, onions)

Touching (plastics, cosmetics)

Using certain drugs (antibiotics, serums)

Typical symptoms of allergies include: presence of itching and watering eyes, appearance of skin rashes and hives, and evidence of labored and painful breathing.

The prevention and treatment for allergies involve:

increasing incidence of death from emphysema and chronic bronchitis.

Reads *Smoking and Health* and reports on the relationship of smoking to emphysema.

Discusses the relationship between asthma and allergies.

Indicates why asthma is sometimes referred to as a symptom rather than a disease.

Using the pamphlet, *Sneeze*, reads and reports on current research in the area of allergies.

Reads *Asthma* and reports about current research on this disease.

Avoiding responsible allergens

Using prescription of antihistamine

Undergoing immunization by injecting specific allergens into the body

Allergies may appear at any age and may change at different times as the child grows and develops.

PERIODONTAL DISEASE

It is estimated that 67 million adults have this disorder, considered the leading cuase of tooth loss in adults.

Interviews a dentist about periodontal disease and reports information to class.

Using a model or a chart of the teeth, identifies the supporting structure of the teeth.

In a healthy mouth, the teeth are supported by a structure consisting of the gums, the jawbone, the periodontal membrane or tissure that encircles the roots of the teeth, and the cementum or outer covering of the roots of the teeth.

Periodontal disease affects tissue and membranes surrounding the teeth, rather than the teeth themselves. It develops in two stages:

1. Gingivitis or inflammation of gums
2. Periodontitis or pyorrhea, the chronic destructive stage of the disease

A major cause of periodontal disease is tartar, which forms along the gums, resulting in swelling and inflammation of the gums near the teeth. Eventually the bones which support the teeth are destroyed.

Although the exact causes of periodontal disease are not completely understood, preventive measures are known and include:

Careful and conscientious brushing of teeth
Regular visits to the dentist
Proper diet

Discusses the importance of starting good oral hygiene at an early age in the prevention of periodontal disease.

NUTRITION: Grade 8

Generalizations

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NUTRITION AFFECTS ONE'S PHYSICAL GROWTH AND DEVELOPMENT THROUGH ITS INTERPLAY WITH HEREDITARY AND ENVIRONMENTAL FACTORS

HEREDITARY FACTORS

Content	*Suggested Student Activities*
Within the limits of hereditary factors, good nutrition helps an individual to attain his optimum growth and development.	Discusses the statement, You are what you eat.
Inherited tendencies toward poor physical development may be controlled by good nutrition or be further aggravated by poor nutrition.	Using reprint, "Taller and Huskier Young Japanese Are Attributed to Increase of Protein in Diet Since World War II" (see p. 177), discusses how inherited tendencies toward poor physical development can be improved by good nutrition.
Good nutrition over several generations can improve inherited tendencies in physical development.	Consults with parents in comparing body sizes of members of family at specific age levels. Reports findings to class. (Resource: *See How They Grow*)
Characteristics of body build are inherited as evidenced by the similarity of bone structures often seen among members of a family.	

ENVIRONMENTAL FACTORS

Content	*Suggested Student Activities*
Environmental factors may affect nutritional health by their influence on available foods, quality of foods, and choices made by individuals. Environmental factors include:	Lists those foods that would have to be eliminated if we had to depend only on locally produced foods and foods in season. Views films, such as *Food: The Color of Life.*[1]
Technology which affects the foods available and the nutritional quality of those foods.	
Modern developments in agriculture, such as food processing, transportation and food marketing, which makes it possible to have a great variety of foods available year around.	
Income or standard of living which affects one's food supply and selection of foods.	Discusses the significance of the food stamp plan in assisting low income families.
Nutritional quality of some food which is regulated by government standards for enrichment, fortification, and sanitary condition.	Does research and prepares a report about the reasons the government made regulations for the enrichment of food, such as white bread, and fortification of food, such as salt.
Inadequate housing or insufficient clothing which may increase the need for food energy to maintain body temperature.	Discusses the relationships between housing and nutrition.
Climatic conditions, such as cold or warm weather, which aggravates the effects of poor nutrition, especially among children. An extremely warm environment is likely to decrease the body's need for food energy because of lessened physical activity.	Discusses the statement: In July as in January, in summer as in winter, what you eat must provide what the body needs, not more and not less.

Taller and Huskier Young Japanese are Attributed to Increase of Protein in Diet After World War II

Special to The New York Times

TOKYO, May 1—A generation of long-limbed girls is putting to rest the base calumny that miniskirts are a bad joke on Japanese women.

Thanks largely to changes in dietary habits, it is believed, there has been a spectacular change in the average Japanese physique since World War II. Not only are young men and women larger than their mothers and fathers but they also have a somewhat different shape.

Increasing affluence and exposure to international taste have greatly widened the culinary horizons here since the war, particularly in the last decade. Meat, milk, bread, cheese and other high-protein foods have become standard supplements to the basic diet, of which rice is the mainstay.

The new diet is apparently remolding the Japanese form. The stereotypical diminutive, long-waisted, bandy-legged figure of the old Japanese woodcut print is becoming harder to find among the young.

Not only are girls longer-legged—their bodies are also becoming rounder and fuller. Their brothers are changing too, becoming taller, huskier and broader of shoulder.

The changes, easily visible, are confirmed by records kept by the sanitation and nutrition section of the Health and Welfare Ministry.

In the lean years immediately after the war, the Government began keeping records of the relationship between food intake and health. Although the crisis has passed, the bureaucratic function was retained, so that precise data on diet and physique have been faithfully kept.

Fumio Yamazaki, an official of the ministry, explained that the average Japanese these days consumes 2,254 calories, less than 100 calories more than he did in the nineteen-thirties.

What has been important has been the addition of animal protein to the diet in some quantity, although it is still below per capita consumption in the United States.

"This is a worldwide tendency," Mr. Yamazaki commented, alluding to the nation's spectacular growth. "Increased income always brings an increased consumption of protein."

He noted that in 1968 the average 20-year old man was just under 5 feet 6 inches and weighed 130 pounds. Thirty years before, the average height of the 21-year-old was 5 feet 3½ and his weight was just over 120 pounds. Six-year-olds were three inches taller in 1968 than in 1938.

Mr. Yamazaki noted that the school lunch program instituted by the Government after the war gave the benefits of the new diet to youngsters in the years when they would do the most good. The lunches include milk, bread, a meat-based soup and other dishes.

"If you talk about a revolution in the Japanese diet, it is in the school lunch program that you will find it," he added.

Some observers have concluded that changes in ways of life as well as ways of diet have contributed to the changing physique.

It has been said that the increased use of chairs instead of squatting on tatami mats has improved the shape of the leg. It also is argued that the reduced use of tight-fitting, restrictive garments has allowed the female figure to develop more fully.

Nonetheless, the Health Ministry's statistics indicate that diet is the most important factor.

The Japanese seem to be paying an inevitable price for their richer diet. The ministry noted that the rate of heart disease and hardening of the arteries had risen sharply in the last 10 years and was approaching the levels in the West.

There is another irony. At the time that Japanese girls' legs are becoming objects suitable for framing in miniskirts, the minis are starting to be driven out by midis and maxis.

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DISCUSSION QUESTIONS

1. What foods have been added to the basic diet of the Japanese people since World War II?
2. Why is the school lunch program referred to as being revolutionary in Japanese diet?
3. How may the information regarding diets contained in this article help people in other areas of the world?

NUTRITION AFFECTS PHYSICAL GROWTH AND APPEARANCE BY ITS INFLUENCE ON THE BODY

Content	*Suggested Student Activities*
BODY SIZE	
Body size is a result of factors such as inheritance, secretion of glands, diet, disease, and activity.	
During the period of growth, increase in body weight in proportion to height is probably the best overall index of nutritional status.	
There will be a gain in weight, if the daily food intake is greater than the amount of energy used daily. If the food intake is less than the body needs, there will be loss in weight.	
Individuals of the same age, sex, and occupation may differ widely in their food energy needs.	Discusses the relationship of an individual's basal metabolic rate to his food energy needs.
Excess food fat, protein, and carbohydrates are changed into body fat, which is then deposited about the organs, between the muscles, or in a layer of fatty tissue under the skin.	Using a chart of the digestive system, traces the path of food through the alimentary canal. Discusses the role of the glands and enzymes in the digestive process.
Fat deposits serve as a reserve supply of body fuel for use in case of temporary shortage.	Views films, such as *Exploring Your Growth.*
Preadolescents and adolescents who are considerably below the average weight for their height and age may tire more easily and have less endurance than others.	
Rest influences body weight through its effect on conservation of energy.	Discusses the relationship of exercise and rest to weight change.
A safe program for reduction of large amounts of weight requires the supervision of a physician.	Discusses why people are often anxious to follow "new" weight-reducing plans.
In reducing body weight, one should strive for a gradual loss with maintenance of a good state of mental and physical efficiency throughout the reducing period.	Interviews a physician on the possible dangers of using diet pills for weight reducing and makes a report to class.
Excess weight may be accompanied in later years by the development of heart and circulatory diseases and diabetes.	Reads and reports about findings relating overweight to heart and circulatory diseases.
It is best to avoid the accumulation of excess weight because of the difficulty of reducing and staying reduced.	Visits one of the weight-reducing clubs in the community. Indicates what these programs hope to achieve for members and the methods used in their programs. Evaluates effectiveness of such programs.
Emotional disturbances such as sorrow, nervousness, and anxiety may increase or decrease the desire for food.	Compares effects of upsetting experiences on eating habits of classmates.

POSTURE

Content	*Suggested Student Activities*
Posture is largely dependent on the tone of the muscles and the proper development of bones, both of which are greatly influenced by nutrition.	Discusses the following statement: Good posture has a great bearing on health, comfort, and the impression you make on others.
A well-built and substantial body frame along with good muscle tone provide the basis for a well-shaped body and good carriage.	Participates in a panel of students to demonstrate relationship of posture to attitudes and personality. (Resource: Dairy Council's Posture Posters.)
There is a danger of improper bone development when children, including adolescents, receive too small a supply of nutrients such as, protein, calcium, phosphorous, and vitamins C and D.	Discusses causes of rickets and preventive steps to be taken to avoid rickets.
Malformed bones resulting from poor nutrition during childhood remain in this condition throughout life.	Participates in communicating with organizations, such as the U.S. Department of Agriculture and/or UNICEF, for information concerning areas in the world where there is a serious problem of malnutrition. Discusses measures that can be taken to help people who live in deprived areas of the world.
Protein needs are highest during periods of rapid growth because of the body's requirement for building bone, blood, and tissues.	

NUTRITION AFFECTS PERSONALITY, VIGOR, AND AMBITION

Content	*Suggested Student Activities*
Personality traits associated with one's nutritional status include cheerfulness and cooperation, self-confidence and poise, interest in others, and emotional stability.	Using photographs and story descriptions of children suffering from serious malnutrition, discusses the importance of nutrition.
People suffering from chronic dietary deficiencies may become morose, unhappy, and humorless.	
Irritation and unhappiness may result when families fall into the habit of disorganized meals and carelessness in eating.	Discusses importance of making meals a pleasant family experience.
Vim and vigor, outgrowths of good health, stem from good nutrition, freedom from disease, and proper habits of living.	
Nutrition can affect the quality of one's work by its influence on physical efficiency.	
Skipping breakfast has been shown to result in a decrease in maximum work rate and output in the late morning hours.	Participates in surveying students on the type of breakfast normally eaten. Compares results with a sample breakfast (see p. 180) which

MEAL PLANNING

Breakfast	**One Example**	**More Ideas**
Fruit or Juice	Grapefruit	Fruit may be fresh, canned or frozen. Suggest combining fruit with cereal sometimes; bananas and cornflakes, raisins and oatmeal. If the fruit is not citrus or tomato, urge good vitamin C sources for other meals.
Main Dish	Oatmeal with Milk	Cereal may be ready-to-eat or cooked kinds. Also suggest eggs, meat, cheese or beans as alternates or as additions for persons with higher energy needs.
Bread: Enriched or Whole Grain	Buttered Toast	Sometimes sweet rolls, coffee cake, pancakes, waffles, biscuits, cornbread, other hot breads, or French toast.
Milk	Milk	Adults may prefer another beverage for breakfast, but should have 1 pint or more of milk a day. Hot cocoa made with milk is a good cold weather choice.
Extras: Sugar, Jam or Jelly	Sugar (on cereal) Jelly	Suggest moderation in additions of sweets.
Lunch/Supper		
Main Dish	Egg & Celery Salad Sandwich	Hearty soups, such as cream of mushroom, chowder, bean, pea; eggs, meat or fish; macaroni and cheese; baked beans; sandwich of meat, fish, cheese or peanut butter; tacos; pizza with cheese.
Vegetable and/or Fruit	Tomato, sliced Variation: Eggs, Scrambled with Stewed Tomatoes	Urge vegetables: raw in salads—carrot-raisin, tossed green, coleslaw; or relishes—carrot, celery, green pepper rings; cooked, as part of main dish or separate. Urge fruits: raw in salads or to eat out-of-hand; cooked, in salads such as prune-cottage cheese; as dessert.
Bread	In Sandwich, or separately	May be part of main dish; also consider: rolls, cornbread, toasted biscuits, other hot breads, crackers.
Milk	Milk	Sometimes part of milk may be in creamed soup, or as cheese, or in dessert such as custard, ice cream.
Simple Dessert sometimes	Peanut Butter Cookies	Desserts may be canned fruits plain, in gelatin or puddings; ice cream or custard; cookies, cupcakes or gingerbread; raw or cooked fruits.
Dinner		
Main Dish	Swiss Steak with Meat Gravy	Suggest variety meats, such as liver, heart, kidney, chitterlings; frankfurters; meat extenders, such as spaghetti and meat balls, macaroni and cheese, rice and chicken; meat loaf; chops, ham hocks; meat stews or fish chowders; fish croquettes; cheese omelets; chicken pies; baked beans or chili con carne.
Potatoes or alternate	Boiled Potatoes	Suggest potatoes baked, mashed, scalloped, as salad; remember sweet potatoes; suggest rice, macaroni or dumplings as alternates to potatoes, or a starchy vegetable such as corn or lima beans.
Green or Yellow Vegetable and/or Salad	Green Beans Cucumber or Celery Slices for crispness	Urge *dark green leafy or deep yellow vegetable* rich in vitamin A *at least every other day;* raw vegetable relishes, such as carrot, green pepper, celery; salads of raw greens, such as spinach, lettuce, endive; or molded salads with shredded raw carrots, cabbage or fruit; or mixed salads, such as cabbage and pineapple. Suggest only light cooking for green vegetables.
Bread & Butter	Cornbread & Butter	
Milk	Milk	Suggest some desserts to add extra milk, such as custard, cheese, pudding, ice cream; fruit; bread or rice pudding with raisins; occasionally cookies, cake, pies or fruit shortcakes.
Dessert	Fruit Gelatin	

Foods for Between Meals, Extra Meals, and Snacks

- An extra glass of milk or fruit juice, or one saved from regular mealtime
- Cheese cubes and crackers
- Apple, banana, orange, dried apricots or other fruit
- Raw vegetable sticks
- Sandwich—meat, cheese or peanut butter
- Lunch or dinner dessert, such as ice cream, saved for between-meal snack

Content	*Suggested Student Activities*
Good nutrition is important for athletic prowess because it contributes to bone and muscle development.	contains the necessary calorie and protein allowances for breakfast.
Young people engaging in strenuous exercise need more of the energy-rich foods, such as fats, cereals, and bread than do less active people of the same age.	Discusses the statement: Members of a winning team need an adequate diet every day, not on days of the game alone. Discusses reasons why most college and professional teams are provided with special training tables during their sport season.
Beverages containing caffeine and alcohol may give one a false sense of well-being; in addition, alcohol has a negative effect on coordination.	Reviews or discusses effects of alcohol on athletic performance.
Good nutrition creates conditions favorable to an individual's mental alertness.	

GOOD NUTRITION REQUIRES A SUFFICIENT QUANTITY OF NUTRIENTS FOR PROPER BODY FUNCTIONING

Content	*Suggested Student Activities*
The nutrient needs of individuals vary with age, sex, activity, climate, state of nutrition, glandular functioning, special physiological stress, etc.	
The need for nutrients, such as calcium and protein is high during the growth period.	Participates in inviting the school physician to bring some X-ray pictures of developing bones and explain them to the class.
Growing boys usually need more food than growing girls because of their greater activity, size, and muscle mass.	
A well-planned family meal may be adjusted to meet the varying needs of family members.	
Energy from food is used to do muscular work, produce body heat, support growth, and maintain the functioning of the vital organs.	
Energy available in food is measured in calories. A calorie is the amount of energy or heat required to raise the temperature of one kilogram (about one quart) of water one degree centigrade.	Reads and reports about the use of a calorie meter by scientists to measure the amount of calories contained in a food.
Each individual has specific energy or calorie requirements based on age, size, sex, basal metabolism, physical activity, and climate. These must be met to maintain good health.	Compares the calorie needs of: a student a football player a carpenter

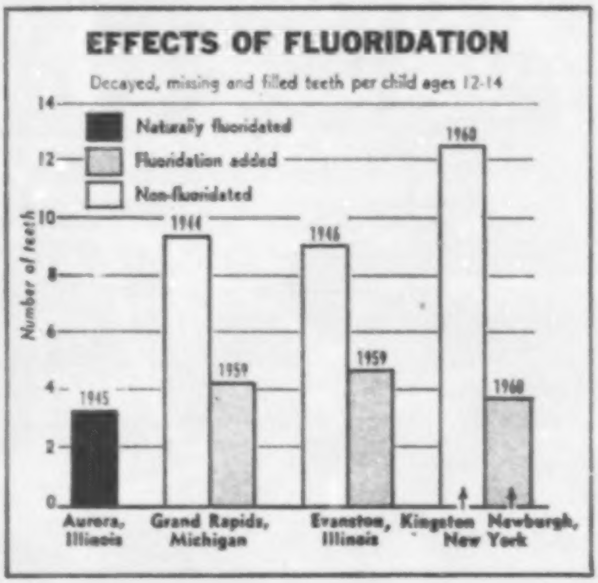
Content	*Suggested Student Activities*
Weight and weight changes are important indicators of the relationship of food energy (calorie) intake to body needs.	Discusses the statement: It might be possible to obtain all the energy needs from a diet and yet suffer from malnutrition.
Food energy value (calorie) of the diet depends on carbohydrates, fats, and proteins, since their end products release energy as they are broken down in body cells.	
Carbohydrates from sugars and starches serve as sources of energy, and help in the maintenance of body temperature. There are many common sources of carbohydrates such as cereals, bread, spaghetti, rice, vegetables, fruits, etc. Carbohydrates serve as the most economical source of body energy.	Discusses why carbohydrates are referred to as "quick energy foods."
Fats are useful in the diet because they provide a form of concentrated body fuel, and help to flavor food. Fats provide 2¼ times the number of calories as the same weight of carbohydrates or proteins. Some plant foods that supply fats are oils extracted from corn, olives, coconut, peanuts, soybeans, and cotton seed. Fats that are supplied by animals include those contained in cream, butter, bacon, meats, poultry, and fish.	Using a chart of nutritive values of foods, prepares a sample diet in which fats approximate 30-35 percent of one's daily food supply. Indicates whether this diet is adequate and why. Reads and reports about current research linking high saturated fat diets with hardening of the arteries.
Protein is an essential nutrient for repair of tissue and for building of new tissue. Protein breaks down into amino acids which are used in growth and maintenance of the body. The need for protein is high during periods of rapid growth because it is used for building tissues, such as muscle and bone. The recommended amount of protein for boys and girls is 50-60 grams daily. Protein in the diet is needed to aid in recovering from wounds, burns, and illnesses. Since the body has a limited capacity for storing protein, an adequate amount of this nutrient is needed daily.	Reads and reports about the differences between complete proteins and incomplete proteins. Lists all the foods eaten at dinner for one week. Beside each food that contains protein, places *C* for complete protein or *I* for incomplete protein. Using a chart of nutritive values of foods, analyzes daily diet in terms of meeting the protein requirement. (Resource: "Eat and Live" issued by the Wheat Flour Institute, Chicago, Ill.)

Content	*Suggested Student Activities*
Mineral substances present in the body serve important purposes, such as, building bone and teeth, forming red blood cells for carrying oxygen to tissues, and regulating many of the body processes.	Discusses reasons why minerals, along with vitamins and water, are often referred to as body regulators.
Calcium and phosphorus are used by the body in building bone and tooth cells, slowing the clotting of blood and helping to prevent muscle cramps.	Lists good food sources for calcium and phosphorus.
When children and adolescents receive too little a supply of calcium and phosphorus, there is a danger of improper bone growth.	
Iron is used by the body in red bone marrow to produce hemoglobin, an important iron compound in red blood cells.	Lists good food sources for iron. Discusses why many nutrition specialists suggest that the maximum level of iron enriched products be increased in foods such as hamburger and hot dog buns, and pizzas.
Hemoglobin combines readily with oxygen, serving as a carrier of oxygen to cells and tissues throughout the body.	
The iron requirement is higher for rapidly growing boys and girls than for most adults because red blood cells are required for the increasing volume of blood that is part of the growth process.	
Iron-deficiency anemia is a condition in which an individual's red blood cells cannot carry enough oxygen to body cells.	
The chief cause of iron-deficiency anemia is failure of the body to form adequate hemoglobin due to such conditions as an iron-deficiency diet, profuse menstrual losses, or loss of blood through injury, illness, and/or infection.	Reads and reports about differences between iron-deficiency anemia and pernicious anemia. Discusses needs for iron by teen-age boys and girls.
Adolescent girls frequently have diets with too little iron.	
Iodine is needed by the body for the normal functioning of the thyroid gland, an endocrine gland which regulates metabolism and the rate at which the body oxidizes fuel to produce energy.	Lists good food sources for iodine. Indicates why it is important to buy iodized salt.
If the activity of the thyroid gland is slow, the body will store up food energy as fat.	Discusses relationship of the thyroid gland with problems of overweight and underweight.
If the thyroid gland is overactive, the body burns food and food reserves too fast causing an individual to become thin.	Discusses how modern nutrition techniques such as fortification helped to rid the Great Lakes area of simple goiter.

Content	Suggested Student Activities
The thyroid gland attempts to adjust to an insufficient supply of iodine by increasing in size, resulting in a condition known as simple goiter.	
Fluorides. Extensive evidence indicates that during teeth development a controlled intake of fluorides results in a substantial protection against dental caries.	Using public health reports, such as the Newburgh, New York, experiment, compares the rate of dental decay in communities using fluoridated water with those not using this mineral in its water supply. (See p. 185.) Using source such as, *Fluoridation Facts: Answers to Criticisms of Fluoridation*, discusses pros and cons of fluoridating water supply.
Vitamins, chemical substances contained in carbohydrates, proteins, and fats, help to regulate body functions.	Using a source, such as *Vital Stories About Some of the Essential Vitamins* or *The Great Vitamin Mystery*, reports about the discovery of various vitamins.
Vitamins aid body tissues in making use of their building and maintenance materials. Hence a serious deficiency of vitamins will result in widespread disorders.	Prepares a chart listing the important vitamins. Includes in the chart disorders caused by a deficiency of specific vitamins and good food sources for each vitamin.
Vitamins are involved in the chemical processes of growth and thus are needed in adequate amounts by children and youth.	Lists situations in which it is desirable to take vitamin pills and situations in which taking such pills are wasteful.
In most cases, a balanced diet is the best way of making sure one is getting a sufficient amount of vitamins.	
Since some vitamins cannot be stored in the body, they must be included in the daily diet.	Does research and prepares a report about Vitamin C as a preventative of the common cold. (Resources: *Consumer Reports*, February 1971, and *Nutrition Today*, January-February 1971)
There is no conclusive evidence that amounts of vitamins beyond the maximum needed for body functions will result in added health.	
Vitamins are present in foods in varying amounts, and they may be lost in processing and in preparation for eating unless care is taken to retain these vitamins.	After consulting with school dietitian, prepares a report on effective methods of preparing and serving foods in order to conserve nutritional value.
Water is needed for all body functions.	Discusses the follwing statement: The human being can live longer without food than he can without water.
The body constantly strives to maintain its vital water balance.	
Approximately two-thirds of the body is composed of water.	Indicates how the body signals it needs water.
Many factors affect the rate of water loss. Among these are climate, working in hot areas, vigorous activities, and fever.	
Water is taken as needed; thirst is usually an adequate guide for satisfying body needs.	

Twenty-five Years of Fluoride Cuts Tooth Decay in Newburgh

By JANE E. BRODY



Twenty-five years ago yesterday, Newburgh, N.Y., a mid-Hudson city with its roots in the 17th century and its eyes on the 20th, began a pioneering experiment that today affects the health of more than 80 million Americans.

The experiment was the addition of tiny amounts of a colorless, odorless, tasteless chemical – fluoride – to the city's water supply. The result, compared to a nonfluoridated sister city, was a dramatic reduction in tooth decay among the children who have grown up drinking Newburgh's fluoridated water.

Dr. Maxwell Serman, a 74-year-old dentist whose practice in Newburgh predates the advent of fluoridation says: "Today, whenever I see a child with a mouthful of cavities, I know immediately he's not from Newburgh."

In the 5,000 American communities that have followed Newburgh's example, the experiment has meant a similar drastic reduction in tooth decay, dental costs and premature loss of teeth and the elimination of millions of toothaches.

Despite these apparent benefits, opponents of fluoridation have won in more than half the 1,139 public referendums held in communities to determine the fate of water fluoridation, and today nearly half the nation served by public water supplies still does not receive fluoridated water.

Opponents Fear Disease

Opponents argue that fluorides can cause cancer, kidney disease, heart disease, poisoning and a host of other disorders. However, in Newburgh as well as in many of the 2,500 American communities where the water is naturally fluoridated, studies have shown that prolonged intake of small amounts of fluoride has no harmful effects.

In New York City, fluoridation opponents succeeded in delaying the start of this public health measure until September 1965 – 10 years after the city Board of Health had recommended fluoridation as a procedure that would benefit both children and adults.

Although it is too early to assess the full effects of fluoridation upon the incidence of dental disease among New York City's children, Dr. Harold K. Addelston, pediatric dentist at New York University Dental School, says that today "we are seeing more children with fewer cavities."

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DISCUSSION QUESTIONS AND ACTIVITIES

1. Using chart on Effects of Fluoridation, compare the incidence of decayed, missing and filled teeth, among cities with natural fluoridation, fluoridation added to water supply, and non-fluoridated water.
2. Why have opponents of fluoridation succeeded in preventing the adding of fluorine in nearly half the nation served by public water supplies?
3. Have a panel discussion on the question of adding fluorine to water supplies.

GOOD NUTRITION REQUIRES A PROPER BALANCE OF NUTRIENTS

Content

Food is one of the most important factors influencing the health and well-being of an individual. It is a factor which the individual can control during most of his life.

The nutritional status of the individual depends largely on the selection of food and the ability of the body to utilize nutrients contained in foods eaten.

When people refuse to eat many foods, they may fail to obtain needed nutrients.

Many combinations of foods or patterns of eating may result in a good diet. Food guides are helpful in food selection.

The Basic Four Food Groups is a helpful guide to proper nutrition because the foods within these groups contain all of the essential nutrients needed for the maintenance of good health.

Milk Group (milk, cheese, cottage cheese, ice cream, buttermilk). This group contributes calcium, vitamin D, riboflavin, and protein to the diet. Four or more servings a day of foods in this group are recommended for teen-agers.

Bread and Cereal Group (all enriched and whole-grain breads and cereals). These are important for energy, iron, and the B vitamins: thiamine, riboflavin, and niacin. Four or more servings a day are recommended for teen-agers.

Fruit and Vegetable Group (all fruits and vegetables). This group contributes important vitamins, minerals, roughage, and energy. Vitamin C sources, such as citrus fruits and juices, should be eaten daily. A good source of vitamin A, such as yellow vegetables (pumpkin, carrots, or winter squash) should be eaten several times a week. Four or more servings a day of foods in this group are recommended.

Meat or Protein Group (meat, fish, poultry, eggs, and nuts). This group provides proteins, iron, thiamine, riboflavin, and niacin. Two or more daily servings are recommended.

The Basic Four Food Groups are guides for selecting a balanced diet in the United States.

Suggested Student Activities

Writes about the following: Man has important control of his health through his selection of his food.

Discusses the statement: Humans are not known to have inherent impulses or drives to select the food they need.

Reads and reports about the Recommended Daily Dietary Allowances (RDA) table prepared by the Food and Nutrition Board of the National Academy of Sciences (see p. 197). Indicates how this table was used for establishing the Basic Four Food Groups and why this table must be continually reviewed and revised.

Observes four or five students as they select their lunches in the school cafeteria or snack bar. Analyzes the lunches to see if they include items from the Basic Four Food Groups (see p. 187). Makes suggestions to improve the lunches.

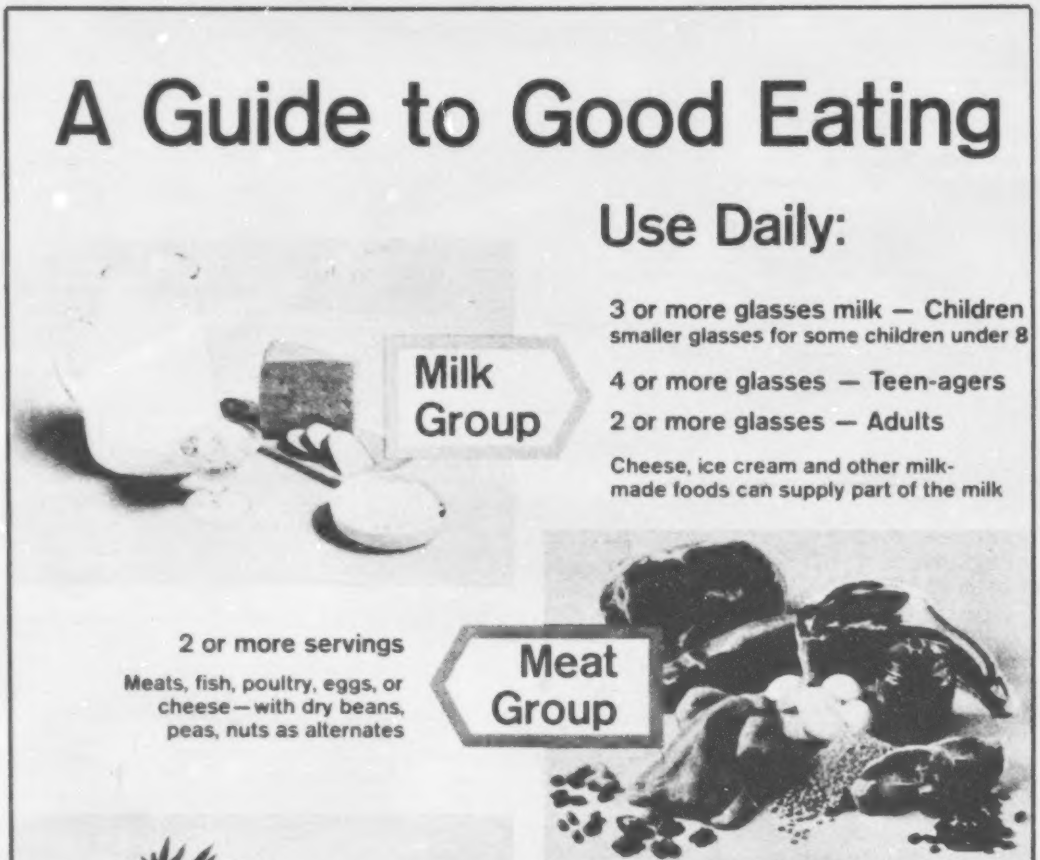
Considers the following question: If you were forced to abandon ship in a small boat and had only four containers in which you could take four different foods, which foods would you choose and why?

Brings labels of bread and cereal products to class. Compares them in terms of enriched or whole grain. Indicates types of bread and cereal products that must be enriched by law.

Prepares a list of all the fruits and vegetables eaten during the preceding 24 hours. Using a Nutritive Value of Food chart, lists the fruits and vegetables which are sources for vitamin A and vitamin C.

Discusses why there is often a protein deficiency in diets of people in economically deprived countries. Indicates the agencies which work to improve the nutritional status of all individuals and describes their roles.

After talking with people who have lived or travelled in other countries, gathers informa-



A Guide to Good Eating

Use Daily:

Milk Group

3 or more glasses milk — Children
smaller glasses for some children under 8

4 or more glasses — Teen-agers

2 or more glasses — Adults

Cheese, ice cream and other milk-made foods can supply part of the milk

Meat Group

2 or more servings

Meats, fish, poultry, eggs, or cheese—with dry beans, peas, nuts as alternates

Vegetables and Fruits

4 or more servings

Include dark green or yellow vegetables; citrus fruit or tomatoes

Breads and Cereals

4 or more servings

Enriched or whole grain
Added milk improves nutritional values

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Content	*Suggested Student Activities*
Other countries have devised similar guides which, because of traditional eating habits, contain different foods. (See *Physical Health, Grades 7, 8, 9: Strand I, Nutrition.)*	tion about the diets of people of other countries. Indicates foods in each diet which provide items from the Basic Four Groups.
Wise distribution of foods among meals and snacks promotes good nutrition.	Modifies the Basic Four to make it more meaningful to different ethnic groups represented in the community.
Meals	Views filmstrips, such as *Your Food—Chance or Choice?*
Breakfasts containing generous amounts of protein are more likely to maintain a feeling of satiety, alertness, and well-being all morning than those containing mainly carbohydrates.	Prepares a list of appetizing foods which would supply proteins for the breakfast meal.
Skipping breakfast has been shown to result in decrease in maximum work output in the late morning hours.	Plays role depicting situation that might cause young people to miss breakfast.
Excessive hunger, brought about by missing meals, may lead to discomfort and indigestion because of overloading the stomach when meals are eaten later.	Analyzes the misconception that missing meals is unimportant providing one gets enough calories in the daily diet. Discusses how proper chewing of food helps the digestive process.
If enough time is allowed for meals, they are more likely to be enjoyed and less likely to be missed.	
Snacks	
Snacks make up an appreciable portion of the day's food for many people. They should be selected for their nutrition value.	Prepares a list of snacks eaten during the last 24 hours. Analyzes this list in terms of meeting the proper daily diet requirements. (Resource: *Your Snacks: Chance or Choice?*)
Snacks may help in maintaining a good diet if they provide nutrients not adequately supplied in the three meals of the day.	Discusses the statement that eating between meals may be harmful or helpful, depending on the choice of foods.
Foods eaten as snacks should be considered in planning or evaluating the day's diet.	
Snacks tend to be rich in carbohydrates and poor in most nutrients, hence they add little but calories to the diet.	
Foods such as fruit and fruit juices, raw vegetable strips, simple sandwiches, and milk are preferable to rich foods that may spoil one's appetite for the next meal.	
Suitable midmorning and midafternoon snacks seem to increase the efficiency of many individuals.	
Well-chosen snacks not only provide a sense of well-being but also supplement the day's meals so that total food intake may fully meet an individual's requirements.	

	Foods	Carbohydrates	Fats	Proteins	Vitamins	Mineral	Water
BREAKFAST							
Between Meals							
LUNCH							
Between Meals							
DINNER							
Bedtime							

CLASS ACTIVITY

List the foods eaten during one day, including snacks.
In the proper columns check the principal nutrients each food furnishes. (See p. 190.)
Evaluate the day's intake in terms of balance.

NUTRIENTS: FUNCTIONS AND SOURCES

KEY NUTRIENTS	*IMPORTANT FUNCTIONS*	*IMPORTANT SOURCES*
PROTEIN	Builds and repairs all tissues Helps build blood and form antibodies to fight infection Supplies energy	Meat, fish, poultry, eggs Milk and all kinds of cheese Dried beans and peas Peanut butter, nuts Bread and cereals
FAT	Supplies large amount of energy in a small amount of food Helps keep infant's skin healthy by supplying essential fatty acids Carries vitamins A, D, E, and K	Butter and cream Salad oils and dressings Cooking and table fats Fat in meat
CARBOHYDRATE (Sugars and Starch)	Supplies energy	Bread and cereals Potatoes, lima beans, corn Dried beans and peas Dried fruits, sweetened fruits; smaller amounts in fresh fruits Sugar, syrup, jelly, jam, honey
MINERALS Calcium	Helps build bones and teeth Helps blood clot Helps muscles and nerves to work Helps regulate the use of other minerals in the body	Milk Cheese, but less in cottage cheese, ice cream Sardines, other whole canned fish Turnip and mustard greens Collards, kale, broccoli
Iron	Combines with protein to make hemoglobin, the red substance in the blood that carries oxygen to the cells	Liver, other meat and eggs Dried beans and peas Green leafy vegetables Prunes, raisins, dried apricots Enriched or whole grain bread and cereals
Iodine	A constituent of thyroxine, a hormone that controls metablolic rate	Seafoods, iodized salt
VITAMINS Vitamin A	Helps keep skin clear and smooth Helps keep mucous membranes firm and resistant to infection Helps prevent night blindness and promote healthy eyes Helps control bone growth	Liver, eggs Dark green and deep yellow vegetables Deep yellow fruits, such as peaches or cantaloupe Butter, whole milk, fortified skim milk, cream Cheddar-type cheese, ice cream
Thiamin Vitamin B_1	Helps promote normal appetite and digestion Helps keep nervous system healthy and prevent irritability Helps body release energy from food	Meat, fish, poultry; pork supplies about 3 times as much as other meats Eggs Enriched or whole grain bread and cereals Dried beans and peas Potatoes, broccoli, collards
Riboflavin	Helps cells use oxygen Helps keep eyes, skin, tongue and lips healthy Helps prevent scaly, greasy skin around mouth and nose	Milk All kinds of cheese, ice cream Enriched or whole grain bread and cereals Meat, especially liver Fish, poultry, eggs
Niacin or Its Equivalent	Helps keep nervous system healthy Helps keep skin, mouth, tongue, digestive tract in healthy condition Helps cells use other nutrients	Peanut butter Meat, fish, poultry Milk (high in tryptophan) Enriched or whole grain bread and cereals
Ascorbic Acid or Vitamin C	Helps make cemanting materials that hold body cells together Helps make walls of blood vessels firm Helps in healing wounds and broken bones Helps resist infection	Citrus fruits—orange, grapefruit, lemon, lime Strawberries and cantaloupe Tomatoes Green peppers, broccoli Raw or lightly cooked greens, cabbage White potatoes
Vitamin D, the Sunshine Vitamin	Helps absorb calcium from the digestive tract and build calcium and phosphorus into bones	Vitamin D milk Fish liver oils Sunshine on skin (not a food)

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GOOD NUTRITION IS PROMOTED BY ESTABLISHING GOOD FOOD HABITS AND GOOD ATTITUDES TOWARD FOOD

Content	*Suggested Student Activities*
The development of food habits is the result of many influences:	Discusses how the school lunch helps to show young people the essentials of a good meal.
Examples set by parents and other adult models	
Family customs, nationality, and religious background	Discusses why it is advisable to introduce new foods and dishes regularly to the family meals.
Advertising	Participates in consulting with a home economist about how a family may overcome certain food prejudices. Reports findings.
	Studies advertisements in newspapers or magazines which illustrate the methods used by food producers to affect food habits of people. Evaluates these in terms of accuracy and ethics. Discusses similar practices employed on television and radio.
	Have students report new foods which they have recently tried and enjoyed.
The development of good attitudes toward food and eating is basic to the development of good food habits.	Role-plays situation in which a parent places undue importance on eating. Discusses effects on the child's eating habits.
The primary purpose of eating is to provide for body needs.	
Although meals should be pleasant and eating enjoyable, pleasure should not become the primary purpose of eating.	Reacts to statement: People should eat to live rather than live to eat.

A CONTINUOUS CHECK OF ONE'S NUTRITIONAL STATUS MAY BE MADE BY KEEPING A RECORD OF BODY MEASUREMENTS, ESPECIALLY HEIGHT AND WEIGHT

Content	*Suggested Student Activities*
Height-weight-age tables are helpful in evaluating the growth of young people.	Discusses how height-weight reference tables are prepared. Indicates criteria used in establishing norms.
Young people who deviate markedly from standards of body size may still be healthy if they are growing and have other characteristics of good health.	Views filmstrips, such as *How Food Becomes You*.

Content

Suggested Student Activities

During the period of adolescence normal boys and girls of the same age may differ by four or five years in their physical development.

Girls begin the adolescent spurt earlier than boys. However, the growth spurt of boys, when it begins, is greater than that of girls.

Rapid growth in weight during adolescence begins in girls at approximately 10-12 years, and in boys at approximately 12-14 years.

In order to properly compare body measurements taken at different times, the following procedures should always be observed:

Remove heavy clothing and shoes.

Take weight measurements at the same time of day.

Assume a standard posture when measuring height.

NUTRITION: Grade 11

Generalizations

AN ADEQUATE AND WELL-BALLANCED DIET IS ESSENTIAL TO OPTIMUM HEALTH. 194

THE HEALTH PROBLEM OF HUNGER AND MALNUTRITION OF LOW-INCOME FAMILIES IS A SERIOUS ONE IN THE UNITED STATES. 196

OVERWEIGHT IS ONE OF THE MOST COMMON FORMS OF MALNUTRITION IN THE UNITED STATES. 202

GOOD NUTRITION IS PROMOTED BY PREPARING AND USING FOODS FOR MAXIMUM NUTRITIONAL VALUE. 206

THERE IS AN IMPORTANT RELATIONSHIP BETWEEN GOOD NUTRITION AND PRENATAL AND INFANT HEALTH. 207

RESPONSIBILITY FOR NUTRITIONAL HEALTH RESTS WITH THE COMMUNITY AND THE INDIVIDUAL AND FAMILY. 211

AN ADEQUATE AND WELL-BALANCED DIET IS ESSENTIAL TO OPTIMUM HEALTH

Content	*Suggested Student Activities*
For health and vigor, a diet should contain appropriate amounts of food from the four food groups.	Lists all foods available in the school cafeteria during a lunch period. Selects from this list combinations of foods that would provide a balanced diet.
When the diet has an appropriate number of calories, it is called adequate; when it has adequate foods from all the food groups, it is called balanced. Calories are not nutrients.	Discusses the statement that it might be possible to obtain all the calories needed from a diet high in sugar and starches, yet eventually literally starve to death for want of essential nutrients.
Cells, tissues, and organs depend on food for repair and rebuilding.	
The essentials of a nutritionally adequate and balanced diet include carbohydrates, proteins, vitamins, minerals, and water.	
Carbohydrates usually provide about half the day's energy requirement. They may also be a valuable source of minerals and vitamins.	Disucsses why carbohydrates are often referred to as energy foods.
Fats provide the most concentrated source of energy. They also provide certain vitamins and essential fatty acids.	Discusses the importance of fats in the diet.
Proteins are important in building and maintaining body tissues. They also contain necessary minerals and vitamins.	Discusses why high-protein diets are particularly important for children, pregnant women, and convalescents.
Vitamins are nutrients necessary for many body processes.	
Vitamin A is essential for growth, vision, healthy skin, and for resistance to infection.	Discusses how vitamin A is related to proper vision
Vitamin B group includes the following:	
Thiamine—essential to growth, good appetite, digestion, and healthy nerves	Reads and reports about causes of beriberi.
Riboflavin—needed for growth and for maintenance of the health of tissues, such as skin, eyes, and nerves	
Niacin—essential for efficient utilization of protein	Reads and reports about causes of pellagra in the southern part of the united States. Indicates how this disease was eradicated.
Other B vitamins, such as folic acid and B_{12} have been associated with the maintenance of healthy blood and other body functions	
Vitamin C is essential to tissue health throughout the body.	Does research and prepares a report about vitamin C as a common cold preventive. (Resource: "Vitamin C, Linus Pauling and the Common Cold")

Content	*Suggested Student Activities*
Vitamin D is necessary to make use of calcium and phosphorus in building bones and teeth.	Discusses how our national program of fortifying milk has made cases of vitamin D deficiency (rickets) rare.
Vitamin E is beneficial to normal reproduction in some animals.	
Vitamin K is necessary for blood clotting.	
Minerals are essential to the regulation of body processes.	
Calcium is necessary for strong teeth and bones, for blood clotting, and for healthy nerve and muscle activity.	
Iron is a vital component in the blood which carries oxygen from the lungs to the body cells.	Discusses why most adult women need more iron than men in light of the following statement: Reliable estimates show that in the United States three out of every five women have some degree of iron deficiency.
Iodine is an important part of thyroxine, the hormone that determines the rate at which bodily chemical processes produce energy from foods (metabolic rate).	Discusses why iodine deficiency may exist in inland areas of northern United States. Indicates what is meant by the "goiter belt" and where this exists.
Sodium, or salt, is essential in maintaining the balance of body fluids in tissues.	Discusses why sodium-regulated diets are prescribed for hypertension. Discusses relationship of salt deficiency to high temperatures and physical exertion.
Fluorine helps protect teeth against decay by hardening the enamel. Fluorine also serves to strengthen bones.	Discusses the use of fluorine in our water supply.
Water is an essential part of all tissues. It makes up approximately two-thirds of the body's weight. No human can live more than a few days without water.	Compares length of time an individual can live without food with the time he can live without water.
Fiber, or roughage, although not a nutrient, is a desirable part of a normal balanced diet. Fiber stimulates intestinal muscles for proper evacuation.	Discusses how roughage acts as a mechanical stimulant in aiding evacuation.
A good variety of everyday common foods can supply the essentials of a balanced diet. Ordinarily, food supplements are not needed when the diet is balanced.	
BASIC FOUR FOOD GROUPS	
The Basic Four is an excellent guide to proper nutrition because the foods in these groups con-	Observes students as they select their lunches in the school cafeteria or snack bar. Records

Content	*Suggested Student Activities*
tain all the essential nutrients needed for the maintenance of health and stamina. (See illustration, p. 187.) This guide is only the foundation for an adequate diet. Depending on the choices made from this guide, one may need additional food to meet daily caloric needs. The Basic Four Food Guide, based on the Recommended Daily Dietary Allowances (RDA) (see p. 197) is designed for the maintenance of good nutrition for most healthy persons in the United States.	items selected for lunch. Analyzes these lunches to determine whether or not they include items from the Basic Four Food Groups. Using a source such as "An Interpretive Review of Recent Research" (Dairy Council Digest, November-December 1968), reads and reports about the significance of the Recommended Daily Dietary Allowances (RDA) in making food choices from the Basic Four Food Groups.

THE HEALTH PROBLEM OF HUNGER AND MALNUTRITION IN LOW-INCOME FAMILIES IS A SERIOUS ONE IN THE UNITED STATES

Content	*Suggested Student Activities*
Many people suffer from hunger and malnutrition in the United States despite the plentiful supply of food in this country. Recent studies have indicated that hunger and malnutrition are serious problems for the following reasons: The poor have limited money to spend for food and therefore must spend more carefully than the more affluent. Poor people often don't know what foods to buy.	Discusses social and educational implications of the following passage from President Nixon's speech: "We see that the problem of hunger and malnutrition is, really, two separate problems. One is to ensure that everyone is able to obtain an adequate diet. The second is to insure that people are properly fed, where they have the ability to obtain the adequate diet." (The White House Conference on Food, Nutrition and Health, December 2, 1969) Discusses the statement: The rich man can make nutritional mistakes in the supermarkets that would be disastrous to the poor man. Discusses ways in which a family can get its money's worth in food values. Keeps a record of the family's food expenditures for a week. Using the standard of a well-balanced and adequate diet, evaluates the expenditures in terms of wise use of money. Indicates desirable changes.
Food fortification programs are not what they should be. Because such programs are voluntary, bread, milk, and salt can be sold without being enriched.	Discusses the reasons for some weakening of the fortification programs in this country.

RECOMMENDED DAILY DIETARY ALLOWANCES[1]

Revised 1968—Food and Nutrition Board, National Academy of Sciences—National Research Council

								Fat Soluble Vitamins			Water Soluble Vitamins							Minerals				
	Age[2] Years From-Up to	Weight Kg	(lbs)	Height cm.	(in)	Kcalories	Protein gm.	Vitamin A Activity I.U.	Vitamin D I.U.	Vitamin E Activity I.U.	Ascorbic Acid mg	Folacin[4] mg	Niacin mg. equiv.[5]	Riboflavin mg	Thiamine mg	Vitamin B_6 mg	Vitamin B_{12} µg	Calcium gm	Phosphorus gm	Iodine µg	Iron mg	Magnesium mg
Infants	0 - 1/6	4	9	55	22	kg×120	kg×2.2[3]	1500	400	5	35	0.05	5	0.4	0.2	0.2	1.0	0.4	0.2	25	6	40
	1/6 - 1/2	7	15	63	25	kg×110	kg×2.0[3]	1500	400	5	35	0.05	7	0.5	0.4	0.3	1.5	0.5	0.4	40	10	60
	1/2 - 1	9	20	72	28	kg×100	kg×1.8[3]	1500	400	5	35	0.1	8	0.6	0.5	0.4	2.0	0.6	0.5	45	15	70
Children	1 - 2	12	26	81	32	1100	25	2000	400	10	40	0.1	8	0.6	0.6	0.5	2.0	0.7	0.7	55	15	100
	2 - 3	14	31	91	36	1250	25	2000	400	10	40	0.2	8	0.7	0.6	0.6	2.5	0.8	0.8	60	15	150
	3 - 4	16	35	100	39	1400	30	2500	400	10	40	0.2	9	0.8	0.7	0.7	3	0.8	0.8	70	10	200
	4 - 6	19	42	110	43	1600	30	2500	400	10	40	0.2	11	0.9	0.8	0.9	4	0.8	0.8	80	10	200
	6 - 8	23	51	121	48	2000	35	3500	400	15	40	0.2	13	1.1	1.0	1.0	4	0.9	0.9	100	10	250
	8 - 10	28	62	131	52	2200	40	3500	400	15	40	0.3	15	1.2	1.1	1.2	5	1.0	1.0	110	10	250
Males	10 - 12	35	77	140	55	2500	45	4500	400	20	40	0.4	17	1.3	1.3	1.4	5	1.2	1.2	125	10	300
	12 - 14	43	95	151	59	2700	50	5000	400	20	45	0.4	18	1.4	1.4	1.6	5	1.4	1.4	135	18	350
	14 - 18	59	130	170	67	3000	60	5000	400	25	55	0.4	20	1.5	1.5	1.8	5	1.4	1.4	150	18	400
	18 - 22	67	147	175	69	2800	60	5000	400	30	60	0.4	18	1.6	1.4	2.0	5	0.8	0.8	140	10	400
	22 - 35	70	154	175	69	2800	65	5000	—	30	60	0.4	18	1.7	1.4	2.0	5	0.8	0.8	140	10	350
	35 - 55	70	154	173	68	2600	65	5000	—	30	60	0.4	17	1.7	1.3	2.0	5	0.8	0.8	125	10	350
	55 - 75+	70	154	171	67	2400	65	5000	—	30	60	0.4	14	1.7	1.2	2.0	6	0.8	0.8	110	10	350
Females	10 - 12	35	77	142	56	2250	50	4500	400	20	40	0.4	15	1.3	1.1	1.4	5	1.2	1.2	110	18	300
	12 - 14	44	97	154	61	2300	50	5000	400	20	45	0.4	15	1.4	1.2	1.6	5	1.3	1.3	115	18	350
	14 - 16	52	114	157	62	2400	55	5000	400	25	50	0.4	16	1.4	1.2	1.8	5	1.3	1.3	120	18	350
	16 - 18	54	119	160	63	2300	55	5000	400	25	50	0.4	15	1.5	1.2	2.0	5	1.3	1.3	115	18	350
	18 - 22	58	128	163	64	2000	55	5000	400	25	55	0.4	13	1.5	1.0	2.0	5	0.8	0.8	100	18	350
	22 - 35	58	128	163	64	2000	55	5000	—	25	55	0.4	13	1.5	1.0	2.0	5	0.8	0.8	100	18	300
	35 - 55	58	128	160	63	1850	55	5000	—	25	55	0.4	12	1.5	0.9	2.0	5	0.8	0.8	90	18	300
	55 - 75+	58	128	157	62	1700	55	5000	—	25	55	0.4	10	1.5	0.9	2.0	6	0.8	0.8	80	10	300
Pregnancy						+200	65	6000	400	30	60	0.8	15	1.8	+0.1	2.5	8	+0.4	+0.4	125	18	450
Lactation						+1000	75	8000	400	30	60	0.5	20	2.0	+0.5	2.5	6	+0.5	+0.5	150	18	450

1. The allowance levels are intended to cover individual variations among most normal persons as they live in the United States under usual environmental stresses. The recommended allowances can be attained with a variety of common foods, providing other nutrients for which human requirements have been less well defined. See text for more detailed discussion of allowances and of nutrients not tabulated.

2. Entries on lines for age range 22-35 years represent the reference man and woman at age 22. All other entries represent allowances for the midpoint of the specified age range.

3. Assumes protein equivalent to human milk. For proteins not 100 per cent utilized factors should be increased proportionately.

4. The folacin allowances refer to dietary sources as determined by *Lactobacillus casei* assay. Pure forms of folacin may be effective in doses less than 1/4 of the RDA.

5. Niacin equivalents include dietary sources of the vitamin itself plus 1 mg equivalent for each 60 mg of dietary tryptophan.

Children affected by malnutrition run a risk of never recovering in physical development and never developing mentally to their maximum capacity.

GOVERNMENT INVESTIGATIONS

Congressional hearings and government-sponsored surveys and conferences, such as the following, have brought the problem of hunger and malnutrition to the attention of the American public.

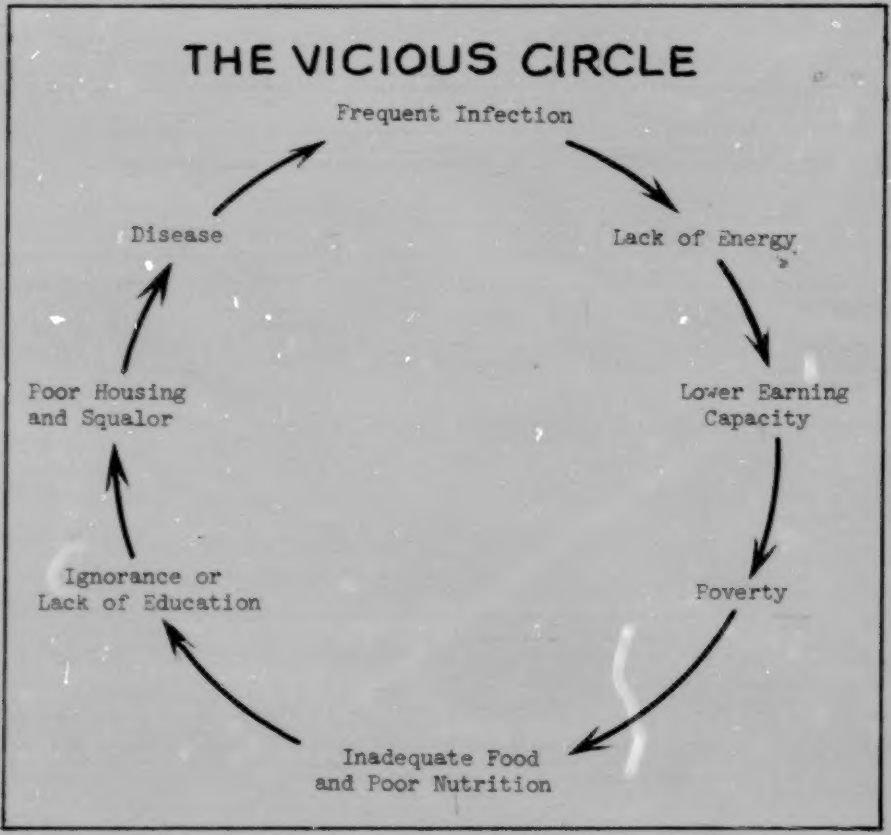
> *Senate Subcommittee Hearings on Hunger in Mississippi* (1967) indicated that there is extreme malnutrition in Mississippi.
>
> *National Nutritional Survey* (1967) was organized when Congress authorized the United States Public Health Service to conduct a comprehensive and scientific survey of the nutri-

Using a source such as, *Malnutrition and Learning*, reads and reports about relationships of malnutrition to mental retardation. (See the reprint, "The Toll of Hunger on a Child's Intelligence," p. 200.)

Reads and discusses the series on malnutrition in the United States in *Today's Health*, September 1969.

Reads the following statement:

> "Previous efforts in nutrition education have been largely ineffective, and most Americans today are abysmally ignorant about the most elementary principles of applied nutrition. This ignorance makes the middle and upper masses ideal targets for food faddists and the poor suffer because their limited food budget allows them little room for mistakes" (Dr. Jean Mayer, Special


THE VICIOUS CIRCLE
Frequent Infection
Lack of Energy
Lower Earning Capacity
Poverty
Inadequate Food and Poor Nutrition
Ignorance or Lack of Education
Poor Housing and Squalor
Disease

tional status of Amercans living in low-income areas.

Senate Select Committee on Nutrition and Human Needs (1968-69) began hearings on the problems of malnutrition among the poor.

White House Conference on Food, Nutrition, and Health (1969) considered the problem of hunger and malnutrition in the United States. The goals of the Conference included:

Eliminating hunger and malnutrition caused by poverty

Promoting a massive program of nutrition education for the public

Forming a basis for national nutrition policy for all Americans, rich or poor

Creating socially feasible solutions to the problems of hunger and malnutrition

Nutrition Consultant to President Nixon). Referring to Dr. Mayer's statement, discusses the following questions:

1. What does Dr. Mayer mean by applied nutrition?
2. How would ignorance in nutrition education make the middle- and upper-income population ideal targets for food faddists?
3. Do you agree with this statement by Dr. Mayer? Why?

Discusses the possible relationships between malnutrition and the outbreaks of violence and destruction in our cities.

GOVERNMENT AID PROGRAMS

Several government programs exist to help low-income Americans improve their nutritional well-being.

The Commodity Distribution Program was a federal program of donated foods. It was originally conceived as a plan to help poor people obtain more food and to provide a market for agricultural surpluses. This program has been replaced largely by the Food Stamp Program.

The Food Stamp Program is based on the assumption that it is better to help poor people buy food in regular grocery stores than it is to give them food directly.

In this program, food stamps are purchased either once or twice a month for a specified price. The food stamps, which are worth more than the money actually paid for them, can be spent like money at a regular supermarket.

Food stamps can be used only for food items.

The Food Stamp Program offers recipients the advantage of greater freedom of choice in foods they buy.

Invites a representative of the local office of the Department of Social Services to speak on food programs available in our city.

Using the resource, *Food Stamps to End Hunger* (USDA), reads and reports about the food stamp program.

Interviews one or several participants in food-assistance program. Reports to class individual participants feelings about the program and their suggestions for changes in the program.

Participates in a panel discussion on the question: What form of food assistance would be of most help to poor people? Considers the following:

Donated Foods Program or some modification
Food Stamp Plan or some modification
Guaranteed annual income with no government food programs

The Toll of Hunger on a Child's Intelligence

Doctors last week reported one more link in the growing chain of evidence connecting intelligence development with early nutrition.

The findings were the result of a three-year study of children from a small agricultural Mexican village. Thirty-seven children hospitalized as babies for kwashiorkor, a severe malnutrition disease, were tested for I.Q. later in life. They scored lower on these tests than their siblings who had not had the severe disorders.

The study was conducted by Dr. Joaquin Cravioto, director of nutrition at Children's Hospital in Mexico City, and by Dr. Herbert G. Birch, a psychologist and professor of pediatrics at the Albert Einstein College of Medicine in New York. It was part of a larger study of ecological factors in child growth and development that they have been conducting for the last seven years.

Data linking development to early nutrition are not new. For years studies on animals deprived of vital foods in the prenatal state of life or just after birth have reported that the animals are smaller, have more difficulty learning, and often have smaller brains—up to 10 per cent smaller—than animals given proper nutrition.

Extrapolation to the human state is not necessarily a direct route, although autopsies of children who died from malnutrition reinforce the animal studies. So has earlier work by Dr. Cravioto and Dr. Birch, among others. They have shown a correlation between the nutrition of a population and its average size, between the mother's height and the infant's weight at birth, between the mother's hygiene practices and the child's weight at birth.

In the new study, each child in the experimental group had been hospitalized somewhere between his sixth and 30th month of life with kwashiorkor. Each had recovered and was five years of age when given standard intelligence tests at the Army Hospital in Mexico City.

As a control group, the doctors chose and tested a brother or sister of each experimental group member. Each sibling in the control group was within three years of age of his brother or sister and had never had severe forms of malnutrition.

It is this control group that makes the experiment different. The most difficult part of this kind of study is finding a control group to match the experimental group.

"We chose siblings," Dr. Birch said in an interview, "because even though malnourishment goes with disadvantage and affects in varying degrees many members of the same society, it is very difficult to match control groups for the exact same socio-economic factors or child-rearing practices as the experimental group. Within the same family, we thought we would eliminate the problem."

Some results of the tests were these:

¶ The average intelligence quotient score of the experimental groups was 68.5. The average for the control group was 81.5. Scores between 95 and 110 are considered normal.

¶ Half of the experimental children scored below 70 on the I.Q. tests, as opposed to about 20 per cent scoring below 70 in the control group.

¶ Only four of the kwashiorkor victims, or 10 per cent, scored above 90, while more than 10 children, or more than one-third of the children who had not suffered from severe malnutrition, scored above 90.

These "insults of environment," Dr. Birch said, are lasting. They affect the child throughout life. And the next generation . . . .

–NANCY HICKS

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DISCUSSION QUESTIONS

1. What is kwashiorkor?
2. How does this study compare with earlier studies made of animals deprived of vital foods.
3. What were the important findings in this study?
4. Why does Dr. Herbert Birch refer to his findings as "insults of environment?"

Study Links Malnutrition and Poverty

By MARJORIE HUNTER
Special to The New York Times

WASHINGTON, April 27—A Senate committee was told today that a Government survey just completed in Texas and Louisiana found "widespread malnutrition," attributed in part to poverty.

"The poorer you are, the more likely you are to suffer from serious malnutrition," Dr. Arnold Schaefer told the Committee on Nutrition and Human Needs.

This finding is expected to bolster efforts by Senator George McGovern, Democrat of South Dakota, and 44 other Senators to attach a liberalized food stamp plan to the Nixon Administration's welfare reform bill passed two weeks ago by the House.

Dr. Schaefer also provided psychological assistance today for another pending bill, for a liberalized school lunch program, by testifying that malnutrition was particularly widespread among poor children. . . .

The real significance of his testimony today lay in relating malnutrition to poverty—a link he had earlier said he was not prepared to make on the basis of preliminary findings.

Testifying before the committee in January, 1969, he had been asked if he could relate malnutrition to low-income levels.

"Honestly," he replied, "we cannot at this point."

But today, on the basis of the complete findings in Louisiana and Texas, Dr. Schaefer testified: "There is no longer any doubt that the incidence of malnutrition is related to poverty income levels."

Last year the Senate approved a bill granting free food stamps for the neediest, but the House Agriculture Committee has stripped away the free-stamp provision and tightened up eligibility requirements.

McGovern's Plan

In proposing that the stamp plan be added to the welfare reform bill, Senator McGovern and others will be seeking to bypass the largely conservative House Agriculture Committee.

Within hours after Dr. Schaefer testified, a Senate-House conference committee approved a liberalized school lunch program entitling children from poor families to free or reduced-price lunches.

The conference agreement, if approved by both the Senate and House, would provide hot lunches for about eight million poor schoolchildren, about five million more than now.

Dr. Schaefer's testimony today was limited to findings in Louisiana and Texas. Next week, he will report on completed surveys in New York, Kentucky and Michigan.

Surveys in five other states—California, Massachusetts, South Carolina, Washington and West Virginia—have not been completed.

Complete Data

Dr. Schaefer testified that complete data on the 13,373 persons examined in Texas and Louisiana bore out preliminary findings of serious malnutrition.

He told of finding two or more nutritional deficiencies in 48.5 per cent of children aged one to nine; 39.5 per cent, aged 10 to 12; and 54.5 per cent, aged 13 to 16.

In Texas, he said, 8 of every 10 preschool children examined were deficient in Vitamin A, a vitamin essential to proper functioning of the skin, cells lining membranes, and proper vision.

Dr. Schaefer also told of finding widespread growth retardation, serious anemia and dental decay among many of those examined.

Dr. Schaefer conceded that some of his findings might be obsolete, since the survey was begun nearly two years ago.

Because of the preliminary findings disclosed last year, many states have expanded their food programs.

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DISCUSSION QUESTIONS

1. According to the findings in Texas and Louisiana, what were the effects of malnutrition on the young children studied?
2. How has the National Nutritional Survey affected the government food programs in many states?
3. Why is there some opposition in Congress to liberalizing food programs for the poor?

Content	*Suggested Student Activities*
	Using sources such as, *You Can Help Fight Hunger in America* and *Food Stamp Handbook for Volunteers*, plans an action program to assist people in the community eligible for food assistance.
	Discusses changes which could be made in the family food programs to make them more useful.
	Participates in preparing a program of action to send ideas to legislators.
The National School Lunch Program began in 1946 when the National School Lunch Act was passed. The school lunch program is designed to serve educational, nutritional, and cultural purposes.	Discusses how the school lunch program can serve educational, nutritional, and cultural purposes.
	Participates in a committee to evaluate the school's lunch program. Committee interviews students, school personnel, cafeteria supervisor, and school dietician. After preparing a list of recommendations for improving the lunch program, the committee meets with school administrators and dietician to discuss ways of implementing the recommendations.

OVERWEIGHT IS ONE OF THE MOST COMMON FORMS OF MALNUTRITION IN THE UNITED STATES

Content	*Suggested Student Activities*
Overweight or obesity is usually seen as an excess of body fat. A common cause is the consumption of too many calories for the body needs.	Evaluates the following statement regarding weight control: Energy from the sun is stored in food which, when eaten by man, is transformed into work energy. If the amount taken in equals the amount used by the body in its daily activities, the body weight will remain constant.
The best way to determine body fatness is by measuring skin-fold thickness.	Uses the pinch test to measure skin-fold fatness by lifting free a fold of skin and its underlying fat in certain body areas, such as the back of the upper arm. (If the fold is markedly greater than one inch, excessive body fat is indicated.)

Content	*Suggested Student Activities*
To determine whether one is overweight, reference should be made to height and weight tables, adjusted to body build and sex.	Compares the health status of a highly muscled football player, without excess body fat, who may be overweight according to the tables of desirable weight, with the inactive student who is overweight.
Factors which may contribute to obesity include:	Using books and articles for reference, prepares a list of reasons why people overeat. (Resource: *Weight Control Book.*)
Faulty diet patterns acquired from parents and/or other members of the family	Discusses how cultural preference for plumpness may result in obesity.
Overindulgence in food consumption by many Americans	
Ignorance of good eating habits	
Lack of control of appetite	
Insufficient exercise	
Relief of feelings of anxiety and tension by overeating	Discusses the statement: The problem of weight control is more of a psychosomatic problem than diet faddists care to believe.
Temptation by advertisements	
Genetic factors which account for certain disturbances in fat metabolism in animals and which may apply, in some cases, to man	
Motivation for weight control should be strong and of long duration. There are no quick miracles or short cuts that can permanently remove excess body fat.	Evaluates effectiveness of common weight-control techniques, such as diet pills, salves, baths, electric belts, etc.
Health consequences of overweight include:	Discusses why some books, such as *Calories Don't Count,* persist on best seller list in spite of condemnation by leading nutritionists.
Overburdening of bones and joints	
Shortening of life expectancy because of effect of obesity on common serious diseases, such as coronary heart disease, high blood pressure, diabetes, gall bladder disease, and certain forms of arthritis	Demonstrates the increased load on the cardiovascular system that is caused by obesity as follows: 1. Have a student of normal weight engage in controlled exercise (stepping on and off a chair for specified number of times).
Interfering with proper functioning of the heart and lungs	2. Measure pulse rate before and immediately after exercise.
Placing an individual at a social disadvantage in a society which values slimness	3. Allow him to rest until his pulse rate returns to normal.
Lowers one's self-respect since it may be a sign that a person cannot cope with the factors that may have caused his obesity, or that he cannot exert enough self-discipline to do something about it	4. Have him repeat the exercise wearing a jacket or coat that is weighted. 5. Again measure his pulse rate.

ENERGY EXPENDITURES FOR VARIOUS EVERYDAY ACTIVITIES

Activity	*Calories Per Pound Per Hour*	*Activity*	*Calories Per Pound Per Hour*
Asleep	.4	Playing ping-pong	2.7
Bicycling, moderate speed	1.7	Reading aloud	.7
Cello playing	1.1	Running	4.0
Dancing, midly active	2.2	Sewing, on machine or by hand	.7
Dishwashing	1.0	Sitting quietly, watching TV	.6
Dressing and undressing	.9	Skating	2.2
Driving a car	1.0	Standing	.8
Eating a meal	.7	Sweeping, vacuum cleaner	1.9
Horseback riding, trot	2.6	Swimming (2 m.p.h.)	4.5
Ironing	1.0	Tailoring	1.0
Laundry, light	1.1	Typing rapidly	1.0
Lying still, awake	.5	Walking, 3 m.p.h.	1.5
Painting furniture	1.3	Walking, 4 m.p.h.	2.2
Piano playing, moderate	1.2	Writing	.7

Adapted from *Foundations of Nutrition* by C.M. Taylor, Grace Macleod, and M.D.S. Rose (New York: Macmillan Co., 1956). Reprinted by permission.

CLASS ACTIVITY

Using information for the chart above, indicate estimated average daily energy expenditure (see form below).

ACTIVITY	HOURS SPENT	CALORIES PER POUND PER HOUR	TOTAL CALORIES PER POUND	STUDENT'S WEIGHT	TOTAL CALORIES PER POUND
Walking	1	1.5	1.5	150 lbs.	225 (150 x 1.5)

Unless basic factors that lead to overeating or underactivity are understood and corrected, success on a weight-reducing diet, if any, is likely to be temporary.

Guidelines for successful weight reduction include:

Consult with a physician to determine possible medical and/or psychological causes of obesity

Develop strong reasons for losing weight

Gain knowledge about good nutrition

Demonstrate will power

Participate in regular physical activity

Maintain a balanced diet while cutting down on the amount of food consumed

Avoid high-fat and high-calorie foods

Eat slowly and in small bites

Drink water freely before, during, and after meals

Use salt sparingly

Space food intake through the day with low-calorie snacks; if possible, cut down on snacks. Be patient about getting results even when food intake is highly restricted and weight loss is slow.

6. Note whether his heart had to work harder with the extra poundage.

Reads about and discusses literary references to fat people which reflect attitudes of society, such as the character Piggy in *Lord of the Flies,* or Fatso in *From Here to Eternity.*

Evaluates the following theory expressed by some psychiatrists: Some obese people have a "food addiction." Like other kinds of addiction, the food addict suffers from withdrawal symptoms when his food needs are not satisfied.

Compares "food addiction" with other types of addiction.

Reads: *The Overweight Society*, by Peter Wyder, which traces modern man's ingenuity in devising schemes for weight reduction. Reports about various reducing diets and their fallacies as described in this book.

Discusses the misconception that vigorous exercise by itself is an effective means of losing weight.

Lists foods which are thought to be low calorie or high calorie. Compares list with a table of calorie values; determines which foods are really high in calories.

Reads and reports about research linking high animal fat diets with hardening of the arteries. (Source: *Heart Disease: What Do We Know About Diet as a Risk Factor?)*

Calculates how long it would take at various levels of calorie consumption to lose given amounts of fatty tissue if one pound of body fat equals 3,500 calories. (Note: A calorie deficit of 1,000 calories a day, which is fairly severe, results in a loss of approximately two pounds per week.)

GOOD NUTRITION IS PROMOTED BY PREPARING AND USING FOODS FOR MAXIMUM NUTRITIONAL VALUE

Content	*Suggested Student Activities*
Nutrients, such as vitamin C, which are soluble in water and changed by exposure to air are easily lost or destroyed in food preparation.	Participates in inviting a member of the home economics department to speak to the class on the proper handling and cooking of foods and on the effects of different methods of preparation on nutritional values and palatability of foods.
The liquid in which vegetables are cooked contains valuable minerals and vitamins, and, if not served with foods, may be conserved by use in soups, sauces, and gravies.	
Appearance, quality, and nutritive value of vegetables and fruits are conserved by quick cooking in small quantities of water.	Discusses the statement: It makes no sense to squander the vitamins in foods and then hope to make up for this by buying more in a store in the form of pills. The use of dollars for nutritional supplements instead of food is wanton waste.
If fruits and vegetables are kept at room temperature after slicing or chopping, they may rapidly lose vitamins through exposure to air and to light.	Reacts to the statement: Nutrients aren't enough; meals must not only be good, they must look good, too. Indicates ways to make meals more attractive.
Keeping vegetables hot after they are cooked, or reheating cooked vegetables, causes loss of some color, flavor, and vitamins.	
Exposure of foods to light has a harmful effect on some nutrients.	
Riboflavin, which is liberally supplied by milk, can be destroyed when milk is exposed to direct sunlight.	
Storing foods in a dark place or opaque container helps to retain their nutritive value.	
Since people eat foods that taste good to them, it is important that foods be so prepared as to be palatable.	Discusses how a gourmet recipe book may help to encourage good nutrition. Lists some new and exciting foods recently tried at home or in a restaurant.
Foods must be made safe for human consumption even though the nutritive value may be slightly impaired.	
Pasteurization makes fresh milk safe for human consumption.	Reads and reports on the history of pasteurization in the United States.
Because of the danger of ingesting trichinae, small organisms which are sometimes imbedded in the muscle fibers of pork, it is necessary to cook this meat thoroughly.	Discusses the importance of sanitation in preventing the spread of parasitic worms. What measures are used to ensure good standards of food sanitation in New York City?
Since the nutrients are usually not equally distributed in all parts of a food, discarding portions of food may reduce its nutritive value.	

Content

Suggested Student Activities

Large amounts of minerals and vitamins in vegetables often lie directly under the skin, so that vegetables cooked in the skin usually retain more food value than those cooked without the skin.

THERE IS AN IMPORTANT RELATIONSHIP BETWEEN GOOD NUTRITION AND PRENATAL AND INFANT HEALTH

Content

NUTRITIONAL NEEDS DURING PREGNANCY

During pregnancy and lactation (the period of breast feeding), nutritional requirements are generally high and are more likely to be met if good food habits have been established during the teens.

Because of the cumulative demands that may be made on the body during repeated pregnancies and because of the difficulty in making quick changes in food habits, women should strive to maintain a good diet during their child-bearing years.

A healthy well-nourished woman is more likely to have a healthy, full-term baby than an undernourished woman.

The mother's well-being during pregnancy and her ability to recover rapidly from childbirth depends on her state of health, including her nutritional status.

Pregnant women should receive individualized recommendations for their diets from a physician, as part of a program of regular medical supervision during pregnancy.

Careful selection of food during pregnancy is necessary to meet the increased need for nutrients without gaining unnecessary weight.

Reasons for following a proper diet during pregnancy include:

Suggested Student Activities

Discusses why many authorities believe that nutritional preparation for pregnancy should begin very early in life, with particular emphasis during adolescence.

Invites the school nurse to speak to the class about the importance of nutrition during pregnancy and during the years preceding pregnancy.

Discusses roles of the expectant father in helping the expectant mother to attain an adequate diet by his support and encouragement.

Using resource materials, such as *Be Good to Your Baby Before It Is Born*, prepares a report on the importance of good prenatal care during pregnancy.

Discusses the importance of consulting a physician as soon as a woman suspects that she is pregnant.

Evaluates the "All-American" eating habits of many teen-agers which consist of hamburgers, french fries and soft drinks. Indicates which important nutrients are lacking in this diet.

Reads and reports about foods which are good sources of protein, iron, calcium, and minerals.

Content	*Suggested Student Activities*
Adequate nourishment is required to build new tissues in the fetus and replenish cells in the mother's body. Vitamins and minerals are essential to supply energy to the mother and to help in the development of the baby. During the first half of pregnancy, a woman need not change her usual diet if she is in the habit of eating foods which supply all of her needs. During the last half of pregnancy, when most of the growth in size of the fetus takes place, the mother's needs for nutrients are increased. Protein, iron, calcium, and vitamins are particularly important during pregnancy. The pregnant woman's need for calories is increased slightly, but not as much as the need for other nutrients. Most physicians recommend a total weight gain during pregnancy of 20-25 pounds.	Discusses why it is advisable for a pregnant woman to use salt sparingly.

NUTRITIONAL NEEDS OF FETUS AND INFANT

During prenatal life and infancy, nutritional needs, relative to size, are greater than at any other time. Because of the rapid growth and development of the fetus and infant, this period of life is extremely vulnerable to nutritional deficiency.	Plots a growth rate curve for prenatal life and infancy, from the first month of pregnancy through the first year after birth. Discusses significance of this growth rate curve to the nutritional needs of the fetus and infant.
Studies show that when mothers are well nourished, infants are in better health at the time of birth, and complications of pregnancy are fewer.	Using resource, such as *Animal Feeding Demonstrations for the Classroom*, prepares a report about studies on animals deprived of vital foods in the prenatal stage of life or just after birth.
The fetus depends on the mother's diet to provide building materials for its growth. During pregnancy, the placenta provides the mechanism for transferring nutrients to the fetus. The blood of the mother and fetus do not actually mix, but they come close together in the placenta so that nutrients can pass across the walls of the blood vessels from the mother's blood to that of the fetus. Nutrients, oxygen, and waste products travel	Reads and reports about functions the placenta performs for the fetus. Indicates organs in the newborn baby which must take over these functions at birth.

Pregnant Women Advised To Gain

By HAROLD M. SCHMECK Jr.
Special to The New York Times

WASHINGTON, July 29—The current practice of restricting a woman's weight gain during pregnancy may be contributing to the nation's high infant mortality rate, a report from the National Research Council suggests.

The council's study panel on maternal nutrition recommends a weight gain during pregnancy in the range of 20 to 25 pounds. Some obstetricians consider even higher gains to be good, but others put the limit at about 10 to 14 pounds. The study panel said this limitation is not justified.

"Current obstetric practice in the United States tends to restrict weight gain during pregnancy," said the report released today by the National Academy of Sciences-National Research Council.

"In view of the evidence available, one may raise the question of whether this practice is in effect contributing to the large number of low-birth weight infants and to the high perinatal and infant-mortality rates."

Figures From U.N.

The perinatal period is the time span before and immediately after birth. Infant mortality rates are figured as deaths during the first year of life among each 1,000 live births. The most recent figures from the United Nations show that the United States rate was higher than those of 12 other major developed nations, including the Scandinavian countries, the Netherlands, Japan, Switzerland, Britain and East Germany.

The infant mortality figures among the poor and some minority groups in the United States drive the national average up.

The report from the research council said medical practice in the United States tended to prevent many pregnant women from having the normal physiological gains in weight, which averages about 24 pounds.

The panel said this was particularly bad for those women who were underweight when they became pregnant and for pregnant adolescents.

Use of Salt Backed

"The importance of adequate diet from the mother's own birth through growth and reproduction should be reaffirmed," the report said. "A good nutritional start early in life is of the utmost importance as preparation for pregnancy."

The panel said particular attention should be paid to women whose nutritional state and dietary habits were poor when they entered pregnancy.

But it also said the routine supplementation of diets with vitamin and mineral preparations was of doubtful value. It excepted from this supplements of folic acid and iron, both of which are important for the body's manufacture of blood. In addition to the need for these two supplements, the panel also suggested the use of iodized salt by pregnant women in areas where the soil and water are deficient in iodine.

The 241-page report covered a mass of evidence from human populations and animal experiments in reaching its conclusions. Among other things, the panel cited the experience of the British during World War II when expectant mothers were given extra dietary allowances to help shield the coming generation of unborn babies from the privations of war. The effect was a more favorable outcome of pregnancy than the British had experienced in the prewar years.

"Between 1939 and 1945, the stillbirth rate fell from a previously rather stable rate of 38 per 1,000 live births to 28, a fall of about 25 per cent during a period when many aspects of the physical environment were deteriorating," the report said.

The panel declared that the risks of pregnancy for both mother and child were substantially greater when the expectant mother was younger than 17 year old. It noted that the number of babies born to adolescents in the United States was on the rise.

The report said most girls under 17 had greater nutritional requirements in proportion to body size than older women and that the additional demands of pregnancy may compromise their continued growth and increase their risks. The child of such a young mother is also at greater risk.

Studies have shown that the risks are particularly great for girls from low income families. The report painted a grim picture of this situation in which multiple factors take an excessive toll among mothers and their infants.

"At low socioeconomic levels, frequent infections and contagious diseases occur during childhood as a result of crowding, poor medical care, inadequate diet and poor dietary habits, and these infections and diseases contribute to poor growth and development during childhood," said the report.

"The girls are likely to marry early, conceive premaritally or at an early age, be poorly educated, engage in hard physical work, have short birth intervals, give little attention to health practices and to seeking health care, and have limited access to adequate medical care."

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DISCUSSION QUESTIONS

1. What recommendation does the National Research Council make regarding weight gain during pregnancy?
2. According to this report, "the routine supplementation of diets with vitamin and mineral preparations was of doubtful value." How then may a pregnant mother obtain the necessary requirements of vitamins and minerals?
3. Why may the risks of pregnancy be greater when the mother is 17 years and under?
4. Why must particular attention be given to pregnant women whose nutritional status and dietary habits are poor?

between fetus and placenta through the umbilical cord.

Infancy is a period when good nutrition is very important for both physiological and emotional reasons.

Milk is the food especially suited to the nutritional needs of infants.

Breast milk is ideal for the infant. If the mother is well nourished, there is little need to supplement the diet of breast-fed babies before they are three months old.

Formulas based on cow's milk (made commercially or in home) can adequately supply the needs of the infant. Vitamins C and D are usually recommended as a dietary supplement when the infant is a few weeks old.

Much of the early experience of the infant is centered around the wanting, demanding, and receiving of food. Thus, some of the emotional needs of the infant are met through feeding and sucking.

If an infant is fed when hungry and if feeding takes place in relaxed, comfortable surroundings, the infant begins to learn to trust and to enjoy his world.

If the infant is often left to cry with hunger for long periods or if he is not held lovingly while being fed, the infant begins to learn not to trust other people.

Adequate nourishment and favorable emotional experiences for the infant can be provided either with breast or bottle feeding.

Participates in consulting a physician and/or dietitian on the advantages and disadvantages of introducing babies to a variety of solid (strained) foods early in life.

Participates in inviting a local pediatrician or public health nurse to discuss the use of breast milk or formula milk for infant feeding. (Resource: *Feeding Your Baby at Your Breast.*)

Discusses the statement: When a mother does not give her infant the time and opportunity for human contact which gratifies his need for a feeling of security, the infant may be described as being "nourished but not nurtured."

RESPONSIBILITY FOR NUTRITIONAL HEALTH RESTS WITH THE COMMUNITY AND THE INDIVIDUAL AND FAMILY

Content	*Suggested Student Activities*
COMMUNITY RESPONSIBILITY	
The community influences city, state, federal, and international agencies which are concerned with various phases of nutrition and food.	Participates in contacting government agencies, such as the New York City Department of Health, the New York State Health Department, the United States Agricultural Department, and the World Health Organization, for information and materials on food and nutrition. Discusses responsibility of the United States in world nutrition.
A sanitary food supply requires proper legislation and interested public opinion.	Participates in surveying local eating places. Reports findings. Participates in preparing suggestions for correcting unsanitary or undesirable conditions.
Fluoridation of water supply requires group action and an informed public. The enforced enrichment of processed foods, when in the interest of public health, requires action at the state and national level.	Discusses the advantages of fluoridated water. Indicates the possibilities that New York City will stop practice of fluoridating its water supply and suggests community action to prevent this.
Maintaining a sound economy with a high rate of employment and reasonable prices for basic food commodities is important to good nutrition.	Debates the question: Is price control needed to stabilize our economy?
Government action on a federal and international level is needed to attack the problem of hunger and malnutrition in certain areas of United States and in developing countries of the world.	Writes to congressman about his concern for people in our country and/or in the developing countries in the world who are suffering from hunger and malnutrition.
Protecting the public against harmful practices and false advertising is a responsibility of government.	Discusses ways that government agencies can protect the consumer.
INDIVIDUAL AND FAMILY RESPONSIBILITIES	
From the variety of foods available, an individual has the power to choose or reject and thus to determine the nutritive value of his diet.	Contacts private organizations, such as the Dairy Council, Wheat Flour Institute, and the Nutrition Foundation, for information and materials on food and nutrition.
Many of the factors which influence nutrition are under the direct control of the individual and the family.	Discusses the questions: Which family member most influences the food eaten by the others? What is a student's responsibility in the selection of foods he eats?

Content	Suggested Student Activities
Regular hours for eating meals, plenty of outdoor exercise, freedom from hurry and anxiety, and a nutritious diet help to maintain a good appetite and improve a poor one. People can improve their nutrition by choosing snacks which provide the nutrients not adequately supplied by the day's meals.	Writes about the theme: Snacks Are Not All Bad. Discusses the statement: With the increasing variety of convenience and snack foods, it may be easier for our children to select a bad diet today than it was for our grandparents.
Eating a wholesome, nutritious breakfast helps people to avoid feeling nervous, tired, and irritable before lunch. Adequate rest helps maintain body weight by conserving energy. Missing meals may result in an inadequate diet.	Surveys several students on their breakfast habits. Asks questions, such as: Do you eat breakfast regularly? What do you prefer for breakfast? Reviews the importance of eating an adequate and nutritious breakfast. Prepares a model of a nutritious breakfast. Discusses disadvantages of missing meals. Indicates how one can make adjustments in his daily routine so as to avoid the practice of missing meals. Discusses importance of balancing good diet and exercise.
Good nutrition may be furthered through wise food budgeting and buying. The family budget should provide sufficient money for food so as to ensure an adequate supply of nutrients. Care should be taken to allow enough money for milk, meat, or other protein-rich foods, vitamin-rich fruits and vegetables, and breads and cereals.	Participates in inviting a member of the home economics department and/or a speaker from the Bureau of Consumer Affairs to talk to the class on food budgeting.
Poor nutrition is likely to become prevalent in periods of rising food costs or loss of income unless people see the need of allocating money for food rather than for luxuries.	Discusses how nutrition education may make it possible for many people with low incomes to have diets that are nutritionally adequate.
Wise food buying involves consideration of unit cost, amount of waste, and nutrients supplied by the food. Protein-rich foods are generally expensive. After the minimum requirements for these foods are met, using carbohydrates and fat-rich foods may save money. A cut of meat which contains much bone, connective tissue, or gristle may be expensive even though the price per pound is low.	Using a food value chart, compares the nutritional value of poultry, fish, beef. After visiting a supermarket, reports about prices of different meats, fish, and poultry. Indicates how this information helps in budgeting food expenses wisely.

Content	*Suggested Student Activities*
Fruits with thick skins or bruised spots, and vegetables with a large proportion of coarse outer leaves or shriveled skins may not be economical purchases because so much has to be discarded.	
A careful study of the unit cost of fresh, dried, canned, and frozen fruits and vegetables may be necessary to determine the most economical form in which to purchase the food.	Participates in communicating with the New York City Department of Consumer Affairs for information on unit pricing. Indicates supporting arguments for this system of pricing foods and arguments used by some food merchants for opposing this system of pricing. (Resource: *Your Money's Worth in Foods.*)
Milk is an economical source of a number of nutrients but cream is expensive to buy in relation to the nutrients it furnishes. For economy it may, at times, be desirable to substitute dried or evaporated milk for fresh milk.	
Good, low-cost diets may be obtained through the liberal use of seasonal fruits and vegetables, protein alternates, and enriched breads and cereals.	
Good nutrition requires that persons be able to discriminate between fact and fallacy.	Lists and evaluates some of the more commonly heard food myths. (Resource: *A Source Book on Food Practices.*)
Sound information about the nutritive value of foods and nutritional needs of the body provides the best basis for making intelligent choices of foods in the midst of the mass of information and misinformation confronting the consumer.	Discusses why people seem particularly gullible about food nonsense. Reports about some unusual food combinations eaten and enjoyed.
There is no basis for the claim that a combination of some foods is harmful or poisonous.	Discusses the possible derivation of the misconception that fish is a brain food.
No food serves a special purpose, as for example, fish serving as a brain food.	Discusses how the improper use of vitamin pills affects a family budget.
Excess vitamins above those needed for use by and storage in the body are not likely to yield special benefits in the form of extra vim or vigor.	
Vitamin pills are beneficial only to the person who has a real deficiency, and many pills contain a number of vitamins which the person does not need in amounts greater than he receives in his usual diet.	
Acid fruits and vegetables do not produce an acid condition of the blood or other parts of the body.	Discusses how acid is necessary for proper digestion of foods and how the stomach produces an acid to aid the digestive process.

Content

Money spent for "health foods" is usually better spent for nutritious foods which contribute to a good diet.

Special diets, advertised to meet specific conditions, often are seriously deficient in some nutrients and would be harmful if used over a period of time.

No foods or diets now known can produce any spectacular benefits for arthritis, rheumatism, or cancer.

Although the individual should always be receptive to new ideas about the use of foods, food fads and sensational claims should be viewed critically in the light of the best current knowledge in nutrition.

Suggested Student Activities

Compares prices of food items in a health store with the same items in a supermarket.

Using a source, such as *The Role of Nutrition Education in Combatting Food Fads*, reports about ways to avoid food fads.

Discusses the characteristics of unethical advertising, such as unwarranted claims, false or misleading testimonials, and use of technical language. Illustrates this by referring to specific advertisements.

Using an encyclopedia, reads and reports about food products, such as:

- Fish protein concentrate
- Grains (whole)
- Yeast
- Oilseed flours
- Soy protein
- Algae

CONSUMER HEALTH: Grade 8

Generalizations

GOOD JUDGMENT IN THE SELECTION AND UTILIZATION OF HEALTH SERVICES AND PRODUCTS ENHANCES HEALTH AND SAVES MONEY. 216

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GOOD JUDGMENT IN THE SELECTION AND UTILIZATION OF HEALTH SERVICES AND PRODUCTS ENHANCES HEALTH AND SAVES MONEY

Content

Health consumers are those who buy or use services or products to satisfy health wants or needs.

The physician is the most qualified person to give advice about the need for health service and/or health products.

HEALTH SERVICES

Administering medical self-treatment without the benefit of a doctor's advice may be dangerous. The hazards of self-treatment include:

Making an incorrect diagnosis

Masking symptoms of actual illness

Causing delay in seeking professional advice while disease worsens

Knowledge of the various types of professional services helps the consumer.

General practitioner, or family physician, is usually qualified in general medicine. Sometimes the family physician may refer a patient to a medical specialist.

Medical specialist is a doctor who has had special training in a particular area of medicine. Medical specialists include the following:

Allergists specialize in the diagnosis and treatment of allergies.

Anesthesiologists specialize in causing loss of feeling so as to prepare a patient for surgery.

Cardiologists specialize in the study and treatment of heart disease.

Dermatologists specialize in diseases of the skin.

Gynecologists specialize in diseases and disorders of the female reproductive tract.

Internists specialize in the diagnosis and treatment of inner organs.

Neurologists specialize in the diagnosis and treatment of diseases of the nervous system.

Suggested Student Activities

Defines health consumer.

Participates in inviting the school nurse or school physician to discuss guidelines for consulting professional health personnel.

Reacts to the statement: He who is his own doctor has a fool for a patient.

Writes a brief essay on the dangers of self-medication.

Using current encyclopedia year-books as a resource, reads and reports about major findings in medicine over the past five years.

Views films, such as *Even for One.*

Views films, such as *Journey into Medicine.*

Using filmstrip series on health heroes, identifies pioneers in the field of medicine, such as:

Marie Curie
Florence Nightingale
Louis Pasteur
Walter Reed

Obstetricians specialize in the care of pregnant women before, during, and after childbirth.

Opthalmologists specialize in diseases and disorders of the eye and vision.

Orthopedists specialize in diseases and disorders of the spine, bones, joints, muscles, or other parts of the skeletal system.

Pediatricians specialize in the care of children usually up to the age of 16 years.

Psychiatrists specialize in the diagnosis and treatment of mental disorders.

Surgeons specialize in performing surgery in cases of diseases requiring operative procedures.

Practioners other than medical physicians provide health services.

Doctor of Osteopathy, the osteopath, uses generally accepted physical, medical, and surgical methods of diagnosis and therapy. However, he places more emphasis on body mechanics and manipulation of bone structure as a means of detecting and correcting ill health.

Participates in inviting a representative from the American Osteopathic Society to discuss professional preparation and the nature of osteopathic practice.

Dentists are trained to treat diseases of the teeth, jaws, and gums. In addition, they are concerned with promoting oral health as part of total health. Sometimes a dentist may refer a patient to another dentist who has had special training in a particular area of dentistry. Dental specialists include:

Participates in inviting a local dentist to discuss dental specialties.

Orthodontists, specialists concerned with space and position irregularities of the teeth.

Periodontists, dental specialists concerned with prevention and treatment of diseases of the gums and tooth-supporting parts of the mouth.

Oral surgeons, specialists in surgery dealing with diseases, injuries, and defects of the mouth, the jaws, and associated structures.

Nonmedical specialists, such as the following, supplement and/or complement the work of a medical practitioner.

Optometrists are trained to measure vision, fit eyeglasses, and provide visual training. Although the optometrist does not treat diseases of the eye, he is trained to detect their problems and make referrals to an ophthalmologist.

Participates in inviting an optometrist to discuss his role as a nonmedical professional.

Content	*Suggested Student Activities*
Opticians are skilled in making optical instruments and grinding lenses according to the prescription prepared by the ophthalmologist or optometrist. They are generally not qualified to examine eyes.	
Chiropractors treat diseases by scientific manipulation and specific adjustment of body structure.	
Clinical psychologists are trained in mental testing and in diagnosis and treatment of mental and emotional disorders.	
HEALTH PRODUCTS	
Health products include prescription and nonprescription drugs.	
Prescription drugs are those that can be used safely and effectively only under a physician's or dentist's supervision.	Examines labels of prescriptions in the home; identifies various entries on the labels.
Procedures for obtaining and using a prescription drug include: Written prescription obtained from a physician or dentist Prescription registered and recorded in pharmacy to facilitate refills Drug taken according to directions on labels Drug discarded when it is old	
Since the improper taking of drugs is a common cause of accidental poisoning, all drugs should be stored safely and out of reach of children.	Discusses why it is unwise to encourage young children to take medicine by telling them that it is candy.
Prescriptions are ordered by a physician for a specific person with a specific illness and should not be used by other family members.	Indicates why pharmacists include, on the prescription label, the name of the individual for whom the medicine was prescribed.
Many medicines lose their strength and may even become poisonous in time. Leftover medicines should be discarded.	Examines with parents the contents of home medicine cabinets and notes dates on the prescription labels. Assists in "cleaning out" the medicine cabinet. Reports on outcome.
Nonprescription drugs or over-the-counter drugs are considered safe for most people to use, providing the directions on the labels are followed.	Collects labels of over-the-counter drugs. Discusses information and warnings found on them. Reads and discusses *Read the Label.*
The fact that a large number of drugs may be	

Content

sold without a prescription does not mean that they are without hazards.

The law requires that all over-the-counter drugs contain labeling that describes how to use them, and warnings on what to avoid.

Over-the-counter drugs should be taken only for minor illnesses which last a short time.

Individuals should avoid becoming steady users of drugs without medical supervision.

Misuse of drugs may lead to serious physical, mental, or social problems.

Suggested Student Activities

Consults local pharmacist for information about over-the-counter preparations which may be harmful if taken for an extended period.

QUACKERY IS DANGEROUS TO HEALTH

Content

The health consumer should be aware that there are unethical persons who try to earn their living by pretending to be skilled or trained medical practitioners.

Health quackery prevents consumers from engaging in sound health practices and deprives them of adequate health protection.

There are definite characteristics by which an informed public may recognize the health quack. These include:

- Offering secret formulas or devices.
- Guaranteeing cures
- Using appealing forms of advertising to encourage new business
- Offering testimonials or statements attesting to the success of treatment
- Claiming persecution by medical men who are afraid of competition
- Claiming that conventional forms of therapy cause more harm than good

Quackery represents a threat to the health, welfare, and life of individuals treated by quacks for reasons such as the following:

Suggested Student Activities

Views film, such as *Medicine Man*.

Using articles such as "Folk Remedies: Part Wisdom, Part Hokum," by W.W. Bauer, discusses old superstitions that might influence our health behavior.

Plays a role involving a situation in which a door-to-door salesman attempts to sell a health product to a housewife.

Using newspapers and magazines, identifies quack devices that are being advertised. Analyzes advertisements in terms of accuracy and honesty.

Indicates why professional medical people avoid making claims about successful treatment.

Discusses possible dangers in the use of products that claim to improve one's appearance.

Discusses why health gimmicks sell so well and why people buy them.

Content	Suggested Student Activities
Quackery may discourage one from seeing a competent physician.	
The victim may receive treatment which could actually worsen the condition.	
Quackery involves useless expenditure of money.	
People consult medical frauds for such reasons as the following:	
Some individuals, when afraid that certain discomforts indicate a serious illness, do anything to allay their fears.	
Some persons who are ill with chronic or poorly understood illnesses grasp at any hope and accept quack treatment.	
Some people lack information concerning the quack and his methods.	

ADVERTISING MAY MISLEAD INDIVIDUALS IN THEIR SELECTION AND USE OF HEALTH INFORMATION, PRODUCTS, AND SERVICES

Content	Suggested Student Activities
The basic purposes of all advertising is to sell products or services.	Reacts to tape recording of radio and/or TV advertisements on drugs.
Advertising and sales promotion are similar ways of encouraging consumers to buy products.	
Advertising is paid, nonpersonal communication through various media.	
Sales promotion includes such activities as contests, premiums, coupons, special price offers, and various other incentives to the buyer.	Visits a pharmacy or discount store to identify efforts to promote health products and compiles a list of common promotional activities.
Advertising may increase consumer demand for products by:	Discusses types of advertising that are effective with students.
Encouraging wider use of products not yet accepted.	Writes on the theme: Does health advertising tell the truth?
Stimulating greater use of products already widely used	Using an overhead projector, shows examples of ads for other students to evaluate as accurate or misleading.
Introducing consumer to a new product	Identifies and reports about a TV commercial

Ads Are Blamed for Pills Overuse

ENTICEMENTS DENOUNCED BY 2 DOCTORS BEFORE SENATORS

WASHINGTON, Nov. 23 (UPI)–Two doctors blamed Madison Avenue image makers today for enticing Americans to take pills for every imaginable purpose, including "sometimes utterly ridiculous reasons."

"In uncounted advertisements we are being told, persuaded and conditioned not to accept any minor discomfort." Dr. J.S. Gravenstein of Case Western University in Cleveland testified before a Senate subcommittee.

"We are continuously bombarded to take drugs for sometimes utterly ridiculous reasons. We are cajoled to pop a couple of pills into our mouth to get fast, fast relief, freedom, pleasure, sleep, comfort, relaxation and regularity.

"The consumer is continuously urged to take drugs. Consequently, he demands drugs also from his physician."

With such "pernicious, irresponsible advertising," Dr. Gravenstein said, "we should not really be surprised when our young people adopt this belief and seek their own drugs to cure their own discomforts, imagined or real."

Dr. Gravenstein and Dr. Sidney Merlis of the New York State Department of Mental Hygiene were critical of hardsell tactics used by drug companies.

"There are instances of drugs which have been given the full Madison Avenue treatment failing commercially and therapeutically because they were found to be unsuitable both by the physician and the patient," Dr. Merlis said.

Their testimony opened a new round of hearings by a Senate subcommittee headed by Senator Gaylord Nelson, Democrat of Wisconsin into Government drug-purchasing practices. In this series, witnesses have been asked to discuss various types of medications now on the market and their relative costs. Today's hearings concentrated on tranquilizers and muscle relaxants.

The doctors asserted that frequently simple, cheaper pills such as aspirin or phenobarbital were just as good and sometimes better than costlier drugs.

Dr. Leo E. Hollister, medical investigator at the Veterans Administration Hospital at Palo Alto, Calif., testified that it was "difficult to prove" that mild sedatives were any more effective than placebos (dummy medications or sugar pills)–for relief of simple anxiety or muscle spasms.

He and other witnesses also questioned the efficiency of muscle-relaxing drugs, saying that taking them was often no different from swallowing a simple sedative–including, said Dr. Russell N. DeJong of the University of Michigan, "even ethyl alcohol."

Dr. Hollister said the practice of prescribing drugs to calm down overactive youngsters was "nonsense."

He said he had heard estimates that as many as 30 per cent of children in some California elementary schools were being given such drugs.

"The normal exuberance of childhood now seems to be viewed as pathological," he said. If this estimate is accurate, he added, "one should not be surprised if 50 per cent of children in high school are using illicit drugs."

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DISCUSSION QUESTIONS

React to the following statements made by the two physicians before a senate subcommittee hearing:

a. "In uncounted advertisements we are being told, persuaded and conditioned not to accept any minor discomfort."

b. "We should not really be surprised when our young people adopt this belief and seek their own drugs to cure their own discomforts, imagined or real."

Content	*Suggested Student Activities*
Advertisers have a responsibility to the consumer, but they do not alway assume this responsibility.	that is in poor taste. Rewrites the script so that the advertisement is in good taste. Compares and discusses these presentations.
Responsibilities of advertisers to consumers include: Making truthful claims Presenting messages that are in good taste Respecting the privacy of individuals Containing labels that are accurate	Plays the game, "Fact or Fallacy." Develops some reliable and some questionable statements and puts them on cards. Puts "Fact" or "Fallacy" on the back of the card. Reads statement to opponents to check for fact or fallacy. Scores team points.
Great care should be exercised in the selection of health products.	
Guidelines for selecting health products include: Disregarding high-powered advertising Studying the labels for ingredients and directions for use Following the recommendations of a physician	

GOVERNMENTAL AND PROFESSIONAL GROUPS PROTECT THE PUBLIC FROM FRAUDULENT HEALTH PRACTICES

Content	*Suggested Student Activities*
Dangers of health quackery have been recognized for centuries and governments have passed legislation to protect the public from such hazards.	
Food and Drug Act of 1906, the first food and drug act passed by Congress, prohibited the manufacture, sale, or transportation of adulterated or misbranded foods, drugs, medicines, and liquors. The law also required that medicines be labeled accurately, and that manufacturers of foods and drugs be prohibited from using harmful substances.	Researches and reports about food and drug abuses which led Congress to pass the Food and Drug Act of 1906.
The Meat Inspection Act of 1906 authorized federal authorities to see that meat shipped in interstate commerce came from healthy animals and was packed under sanitary conditions.	Using *The Jungle*, by Upton Sinclair, as a resource, discusses how social critics may alert the public to consumer hazards. Compares social critics of the early 1900's with those of today.

Content	*Suggested Student Activities*
Federal Food, Drug, and Cosmetic Act of 1938 strengthened the Food and Drug Act of 1906 by imposing stricter regulations and higher standards in the manufacture of foods, drugs, and cosmetics.	Reports about provisions of the Federal Food, Drug, and Cosmetics Act of 1938.
Since 1938, Congress has continued to enact legislation which serves to reinforce consumer protection.	Reports about provisions of the 1962 Kefauver-Harris Drug Amendment.
Several governmental agencies' major function is the protection of the public from health frauds.	
Food and Drug Administration (FDA) has the responsibility of enforcing the Federal Food, Drug and Cosmetic Act.	Participates in inviting a representative from the regional office to speak to students on FDA functions.
Federal Trade Commission (FTC), among its various responsibilities, has jurisdiction over the advertising of foods, nonprescription drugs, cosmetics, and devices, regardless of the communication media used.	Researches and reports about abuses leading to the creation of the Federal Trade Commission.
U.S. Postal Service protects the consumer by preventing the use of the mails to perpetuate fraudulent schemes and the sale of nostrums (questionable medicines).	Participates in arranging for local postmaster or his representative to talk about efforts of the Postal Service to prevent the use of the mail for medical fraud.
New York State Bureau of Consumer Frauds and Protection, which is under jurisdiction of the Attorney General, has been effective in protecting the consumer.	
New York City Department of Consumer Affairs provides advice and protection to consumers.	
Various local, state and national professional groups conduct antiquackery programs. These groups include: American Medical Association American Dental Association American Dietetic Association American Hospital Association	Participates in contacting selected professional groups for information programs designed to protect the consumer.
Commercial groups, such as Better Business Bureau, Consumers' Research, and Consumers Union, are often able to advise the health consumer on authenticity of health products.	Using a current copy of *Consumer Reports* (Consumers Union), discusses how a magazine of this type serves to protect the health consumer.
Certain magazines, such as *Good Housekeeping, Parents Magazine*, and *Changing Times*, provide a testing and rating service which may be helpful to consumers in selecting health products.	Participates in writing to Good Housekeeping Institute (959 Eighth Avenue, New York, N.Y. 10019) for information on their rating and testing service.

CONSUMER HEALTH: Grade 11

Generalizations

CONSUMER BEHAVIOR IS INFLUENCED BY MANY FACTORS. 226

USING SOUND CRITERIA HELPS INDIVIDUALS MAKE INTELLIGENT CHOICES IN SECURING PROFESSIONAL HEALTH SERVICES. 229

PROVIDING THE CONSUMER WITH ADEQUATE AND QUALITY HEALTH CARE IS AN IMPORTANT COMMUNITY CONCERN. 232

CONSUMER BEHAVIOR IS INFLUENCED BY MANY FACTORS

Content	*Suggested Student Activities*
Manufacturers of health products learn about consumer buying patterns in the following ways: Determining products and brands people buy Finding out about seasonal use of products Analyzing fashions, fads, and other consumer trends	Uses a taped radio and/or TV commercial to demonstrate how advertising supports the consumers' buying urges.
Psychological factors are used to influence consumer behavior. Psychological techniques and motivation analysis have become the basis for selling to the public. Motives for buying health products are complex and often involve emotional responses.	Discusses reasons why people buy such items as nonprescription drugs. Classifies these in one of three major areas: physical, emotional, and social. Prepares a checklist and, using this list, asks parents and friends why they purchased a specific item.
Emotional motives for buying health products and services may lead to unwise and dangerous consumer behavior.	Discusses the accusation frequently made that drug advertisements aggravate the drug problem by promoting pill-taking as a means of feeling better.
Rational motives for buying generally lead to appropriate consumer behavior.	
Teen-age markets offer lucrative business to those promoting health services and products. Much teen-age consumer behavior gives evidence of their strivings to reinforce self-image attain maturity seek sexual identification be accepted by peers	Participates in preparing a bulletin board displaying examples of appeals used in advertising products that appeal to teen-agers. Using these examples, classifies them by their appeal to teen-age consumer behavior.
Teen-agers, as a group, exert considerable emotional influence on purchases made by the family.	Discusses how teen-agers, as a group, have an important influence on consumer purchasing.
Ignorance and gullibility influence consumer behavior. Faulty knowledge or lack of knowledge about a condition or disease may result in the purchase of worthless or harmful health products and services. The tendency of many individuals to accept as fact whatever they see or hear influences buying habits.	Using the copper "arthritis bracelet" as an example, discusses how ignorance and gullibility may lead consumers into purchasing worthless health products. (See reprint, "Arthritis 'Economics,' " p. 227.)

Arthritis 'Economics'

by **SYLVIA PORTER**

The copper "arthritis bracelet" is in a spectacular comeback—with countless hundreds of thousands of Americans spending from $1 to $10 to $100 for this form of copper jewelry which is supposed to help prevent and/or cure a disease from which more than 17,000,000 Americans are now suffering.

While precise statistics are unavailable, this single slice of the "anti-arthritis business" now accounts for tens of millions of dollars in annual sales and covers copper jewelry ranging from tie clips to cuff links, from bracelets to anklets.

And this is occurring in the face of the fact that the Post Office Dept., the Federal Trade Commission and the Food and Drug Administration have repeatedly condemned as fraudulent any claims that copper bracelets would cure arthritis (although admittedly, in most cases, no written claims are actually made). Also utterly phony are any claims that two copper bracelets, one worn on each wrist or each inner sole, create a special therapeutic "circuit."

* * *

Nevertheless, just because arthritis now affects one out of every 12 Americans and the number of sufferers is growing by 250,000 a year, any suggestion of relief is immediately seized upon by millions and immediately mounts into big-time money.

The total economic cost of arthritis is up to a record $3.6 billion a year, estimates the Arthritis Foundation in New York—in the form of medical care costs and wage losses, lost homemaking services and premature deaths. On top of this, the "hidden" costs—in the form of spending on worthless arthritis "clinics" and treatments—are up to a peak $400 million, almost double yearly costs in the 1960s.

As you would expect, financial outlays for fake cures and phony treatments swell with the number of arthritis sufferers. Worthless cures tagged by the Arthritis Foundation now cover white metal-and-plastic "electro-galvanic" bracelets; expandable "magnetic" bracelets; special electrical vibrators; hyper-immune milk; high priced "magic spikes" containing a few pennies' worth of various vitamins, laxatives and ointments; bootleg drugs illegally imported here from Mexico and Canada.

A key factor helping the quacks is that there are periodic remissions in arthritis in which pain temporarily subsides.

In a significant number of cases, involving even the most severely stricken, the painful symptoms may disappear permanently. This fortunate quirk easily can give both patients and quacks reason to believe a costly quack "cure" is working.

I will not downgrade one tiny bit the anxiety of a person suffering from great pain or a terminal illness to try anything at any cost in the hope of relief or cure. But the tragedy is that you might delay legitimate diagnosis and treatment, you might waste the most precious time as well as money in your commitment to quacks.

The bright fact is that we are at a moment in medical history when nearly three out of four cases of crippling arthritis can be headed off by early detection and proper treatment.

The merciful prospect is that we are near major breakthroughs in drugs to treat arthritis.

* * *

Thus, if you are among the 17,000,000 sufferers, or close to an individual who is, heed these warnings:

¶ Stay away from any practitioner who claims his cure—drug or device—is "secret," "quick," "easy," or is shunnned by the establishment doctor afraid to lose patients.

¶ Be wary of any person who uses "testimonials" from former patients as a lure, and avoid "home cures" not prescribed or at least approved by your own physician.

¶ Don't postpone conventional treatment or abandon an ongoing program to patronize an unconventional course of therapy.

Buy a copper bracelet or anklet or whatever for good looks, if you like—but not for treatment of arthritis.

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DISCUSSION QUESTIONS

1. Why would an item such as the "arthritis bracelet" make a comeback in popularity among victims of arthritis?
2. What is the role of governmental agencies in protecting the consumer from fraudulent claims?
3. How successful is modern medicine in the prevention of crippling arthritis?

F.T.C. Challenges Drug Advertising

Questions Substantiation of Sunburn Remedy Claim

By JOHN D. MORRIS

Special to The New York Times

WASHINGTON, April 21—The Federal Trade Commission is reaching for a new weapon against questionable advertising in accusing a drug manufacturer of illegally representing a sunburn remedy as a pain-relieving anesthetic.

The purpose of a complaint issued last Thursday against Charles Pfizer & Company, Inc., of New York is to establish the commission's authority to require advertisers to substantiate representations made for their products.

In the past, the burden of proof that advertising is unfair, misleading or deceptive has been on the commission.

The commission challenged advertisements that a product called Un-Burn "anesthetizes nerves in sensitive sunburned skin" and "relieves pain fast." Without charging that these and similar statements were untrue, the commission said:

"Respondent represents, and has represented, directly or by implication, that each of the statements respecting the pain-relieving properties of the said product has been substantiated by adequate and well-controlled scientific studies or tests."

Since the statements have not been substantiated by such studies or tests, according to the complaints, the advertisements are "unfair, misleading and deceptive" and are in violation of Section 5 of the Federal Trade Commission Act.

If the courts should sustain the commission's new concept—that advertisers violate the law by making unsubstantiated but not necessarily false representations—the commission's regulatory power would be greatly strengthened.

In the same complaint, the commission took another innovative step by challenging the labeling as well as the advertising of Un-Burn. Past practice has been to cede jurisdiction over mislabeling of food and drugs to the Food and Drug Administration.

On labels, Un-Burn is identified as "comprehensive treatment for 'sunburn'.. relieves pain . . . anesthetic." The commission cited the labels, along with broadcast and printed advertisements, as examples of illegal representations.

The commission invited the company to file an answer within 30 days or to waive a hearing and admit the allegations. A waiver probably would result in a cease-and-desist order. Each violation of such an order is subject to a $5,000 penalty.

The company has not decided whether to contest the case, a spokesman said today. If a contest is undertaken, the issue will probably have to be resolved by the courts.

In a prepared statement, the company said the commission did not allege that documentary proof of the sunburn lotion's effectiveness "are not available" but merely contended that "such proofs were not available before these statements were initially made."

"The challenged advertised statements for Un-Burn," the company added, "are true and are supported by controlled clinical studies conducted by eminent experts in the field of dermatology.

"In this proposed complaint, the F.T.C. is seeking to establish new legal theories that have no precedent in cases that have been decided by the courts or by the F.T.C."

Government officials said the complaint against Pfizer was in line with President Nixon's promise of a "revitalized" Federal Trade Commission under a new chairman, Caspar W. Weinberger.

The complaint represented the commission's first attempt in recent history to expand its own powers, although it has occasionally recommended legislation to that end.

On the legislative front, the commission under Mr. Weinberger has stepped far ahead of the Nixon Administration in advocating new consumer protection laws. It has, for example, asked Congress to authorize the regulation of a private manufacturing industry by the passage of an automobile quality control act. The Federal Government, under the proposed act, would prescribe and enforce minimum standards of durability and performance for new cars.

And Mr. Weinberger has testified in favor of legislation to give the commission "more comprehensive tools" than the Nixon Administration has proposed.

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DISCUSSION QUESTIONS

1. What is the basis for the Federal Trade Commission's action in the case cited in this article?
2. How must manufacturers substantiate advertised statements of their products?
3. What is the responsibility of the Food and Drug Administration in cases of mislabeling of food and drugs?

USING SOUND CRITERIA HELPS INDIVIDUALS MAKE INTELLIGENT CHOICES IN SECURING PROFESSIONAL HEALTH SERVICES

Content	*Suggested Student Activities*
Unprecedented increases in both volume and variety of health information in the mass media make it important that individuals be able to evaluate such information critically.	Compares health information pamphlets prepared by commercial agencies with those prepared by professional or governmental agencies. (Pamphlets on care of skin, hair, teeth, foods, and drugs might be used.)

RELIABLE SOURCES OF HEALTH INFORMATION

Content	*Suggested Student Activities*
Reliable sources of health information are available to the interested consumer. These include: Family physician County medical society Hospital administrator Health educator Voluntary, professional and government health organizations	Compiles a list of reliable sources of health information. Reports about information and materials on health care available from the Mayor's Organizational Task Force for Comprehensive Health Planning.
Before accepting health advice, consideration should be given to the qualifications of the person offering the advice.	Collects advertisements from magazines or newspapers. Using the following guidelines, evaluates the products and services offered: 1. Who are the persons or organizations giving advice? 2. What is the educational background in health sciences of the individuals offering advice? 3. What kind of reputation does this person have in the community? 4. What are the motives of the ad? 5. Is the information presented in a scientific manner?

UNRELIABLE SOURCES OF HEALTH INFORMATION

Content	*Suggested Student Activities*
Health information based on superstition, ignorance, or prejudice, rather than on scientific evidence, can be expensive and harmful to the health consumer.	
Family customs sometimes result in improper health practices and attitudes.	Using article, "Folk Remedies: Part Wisdom, Part Hokum," by W.W. Bauer, compares folk remedies for conditions such as warts, arthritis, constipation, burns, etc.
Other unreliable sources of health information include the suggestions made by quacks or by some commercial organizations. A person with a disease for which there is no known sure cure is prey to the quack's unscrupulous tactics.	

Content	*Suggested Student Activities*
Cancer quackery is one of the cruelest types of quackery because the person who goes to a cancer quack may delay medical treatment until it is too late. Some common quack techniques for treating cancer include pastes, sprays, gadgets, and diet. Even though many quack cancer treatment centers have been exposed and banned in this country, it is still possible for an individual to receive such treatments in another country.	Participates in inviting a representative of the American Cancer Society to discuss the problems of cancer quackery, and how we can develop better understanding of devices proclaimed to be quick cures for cancer.
Arthritis and rheumatism quackery is widespread. The nature of arthritis, its prevalence, and the medical profession's inability to cure the condition at present, have made arthritis victims a prime target for quacks.	Prepares an advertisement for arthritis treatment that sounds legitimate, but is absolutely worthless. Engages in a contest to choose the most convincing advertisement; the prize is a toy duck that quacks.
Some quack remedies for treating arthritis include radiation from uranium mines, hydrotherapy, or mineral spas and baths, expensive drugs, curative foods, and liniments.	Views films, such as *Misery Merchants.*
Pseudoscientific practices result from the fact that some physical illnesses run a course and then vanish with or without treatment.	Participates in inviting a representative of the local county medical society to talk about the existence of questionable medical practices in the community.
Many physical illnesses are psychosomatic. The American Psychological Association has reported that increasing numbers of unqualified persons (psychoquacks) are engaging in various forms of therapy which may, in the long run, be harmful to the patient.	Discusses why many quacks depend largely on people with psychosomatic illnesses for their practice. Reads and reports on the use of hypnosis in medicine. Reports about the dangers of hypnotizing by an unqualified person. Reads articles, such as "Sensitivity Training: Fad, Fraud, or New Frontier?" (*Today's Health,* January 1970) and "Encounter Groupers Up Against the Wall" (*New York Times Magazine,* January 3, 1971). Discusses the pros and cons of sensitivity training.
There are many pseudosciences which involve unproven psychological phenomena. Among them are astrology, graphology, palm reading, phrenology, and physiognomy.	Prepares short reports for class discussion on the pseudosciences.

EVALUATING EXERCISE DEVICES AND PROGRAMS

The importance of daily physical activity is supported by medical research. Sedentary living, often characteristic of modern	Discusses why so many Americans are attracted by outlandish claims about new exercises or devices that promise weight loss and thin waistlines with absolutely no effort.

Content	*Suggested Student Activities*
Americans, contributes to a variety of health problems. However, physical activity, engaged in properly, can overcome these problems and make increased leisure more enjoyable and healthful.	
Exercise devices and programs should be evaluated in relation to their contribution to such physical fitness components as: Circulatory-respiratory endurance Muscle strength Muscular endurance Flexibility	Reacts to the statement: Effortless exercise cannot benefit a person in any medical way. If a person is going to benefit from exercise, he must put effort into it.
Circulatory-respiratory endurance is the ability of the body to do work over an extended period of time because of the efficiency of the circulatory and respiratory systems.	Using the physical fitness components as a guide, evaluates the contribution of such equipment as abdominal belts, electronic stimulators, and belt massagers.
Exercise devices that may contribute to circulatory-respiratory endurance include treadmills, stationary bicycles, rowing machines, and similar devices or programs that promote increased circulation.	Evaluates validity of claims that vibrators or massage devices "redistribute fat" in light of the fact that body fat accumulates as a result of inactivity and overeating.
Muscle strength, or the ability to work against resistance, can result from using muscles regularly against a resistance that is greater than normal.	Differentiates between fitness benefits of isometric and isotonic exercises.
Isometric (no movement) or isotonic (movement) exercises may be followed to improve muscle strength.	Evaluates an advertising claim that using a certain piece of equipment for three to six minutes a day will give all the benefits of swimming a mile or jogging two miles.
Devices currently available which may be used to improve muscle strength include standard barbells and dumbbells, multiple-station gyms, heavy spring devices, and other similar products, provided they are used properly and long enough.	
Muscle endurance is the ability of specific muscles to do work for a continued period of time.	
A weight-training program is one means of improving muscle endurance. Emphasis is placed on doing repetitions with a lighter weight or lighter resistance.	
Flexibility is the ability of joints to move through a full range of motion.	Indicates why a program of isometric exercises would fail to improve flexibility.
Exercise devices or programs should allow for muscles, tendons, and ligaments to move through a full range of motion.	Indicates why flexibility exercises make a person less prone to injury.

PROVIDING THE CONSUMER WITH ADEQUATE AND QUALITY HEALTH CARE IS AN IMPORTANT COMMUNITY CONCERN

Content	*Suggested Student Activities*
It is important to select physicians and dentists who are professionally competent and with whom one can establish a satisfying doctor-patient relationship.	Asks parents how they selected their health advisers for each specialty. Tabulates responses using the following categories: neighbor, family, friend, family doctor, medical or dental society, recommendation by a specialist, others. Reports findings to class. Discusses validity of sources.
Procedures for selecting professionally competent personnel include: Securing names of medical and dental practitioners from county medical or dental societies, approved hospitals, and local health centers. Checking professional standing in the community from a source. Making an appointment to see if the professional's personality is compatible with the patient's.	
Medical care personnel and practices have changed markedly in the past 25 years.	
The type and quality of medical care received is determined to a great extent by availability of physicians in a particular geographic area.	Participates in surveying the community to determine the physician-patient ratio. (The county medical society or city directory lists the number of physicians in practice.) Compares this physician-patient ratio with that for: United States (1 to 740) New York City (1 to 540)
The Emergency Health Personnel Act of 1970 is designed to attract medical personnel to ghetto and rural areas. This law enables doctors, dentists, nurses, and other health professionals to enlist in the Public Health Service to serve in areas where the demand for medical services is high.	Discusses reasons for the passage of the Emergency Health Personnel Act. Indicates what the impact of this act will be on the practice of medicine in the United States and whether this act might become a first step toward nationalizing the medical care system in the United States.

MEDICAL-CARE PLANS

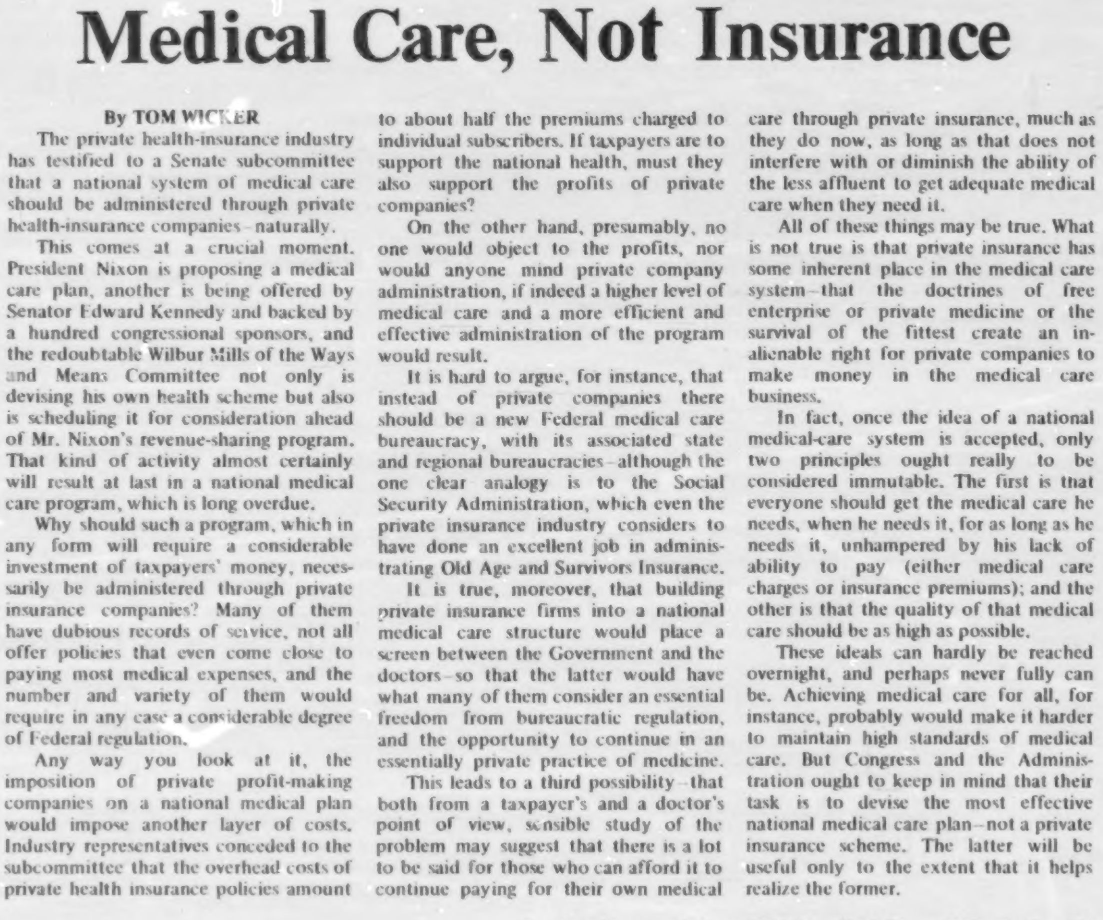
Consumers of medical care continually demand more health protection and higher quality care. It is important that young people prepare to make decisions relative to medical-care plans.	Views films, such as *Dialogue With Life*.
Voluntary health insurance programs are designed to assist the individual and his family in	Discusses why an individual should pay health insurance when he can earn interest from the

Content	*Suggested Student Activities*
avoiding financial hardship when illness or accidents occur.	money in the bank and then have it available when needed.
The type of voluntary health insurance purchased is dependent on money available and the type of coverage needed by the individual or family.	Determines cost of a routine operation, such as appendectomy. Compares this cost for patients who have no insurance with those who have hospital insurance.
Voluntary insurance plans offer the following types of protection: Loss of income Hospital expense Surgical expense Major medical	Participates in a committee to determine the total cost of an illness, such as a stroke. Includes expenses for hospital, drugs, nursing care, physicians, ambulance, loss of income, etc.
Criteria for selecting a voluntary plan include making certain that the company is reliable and that the provisions of the policy meet the individual's specific needs. Some voluntary health insurance plans are:	Asks parents what health insurance they have and what benefits are provided.
Blue Cross-Blue Shield is one of the most common voluntary health insurance programs.	
HIP (Health Insurance Plan) is a health insurance plan in New York City. It is a prepaid group medical insurance plan. (This plan was originated to care for the municipal workers in New York City but now other people may join.)	
Compulsory or government medical care programs provide medical services to those who may be unable to bear the costs of such care.	Does research and prepares a report about socialized medicine in Britain and other countries.
Medicare is a two-part health insurance plan designed to benefit all persons 65 years of age and over. The public contributes to the Medicare program through social security tax payments.	Participates in a panel discussion on the question: Are government medicine programs a move toward socialized medicine? Refers to *Health Insurance Under Social Security—Your Medicare,* describing Medicare benefits and uses it for participating in a group discussion on Medicare.
Medicaid, a state program of medical assistance for needy persons, is financed by state and federal governments. Eligibility requirements, under the present law, are based on the net income of the family, the number of persons in the household, and the number of wage earners.	Discusses the question: Is health care a right or a concession? Reads *Medicaid—How New York State Helps Where Illness Strikes.* Discusses how families qualify for this program.
National health insurance is recommended by many groups because of the sharply rising cost of medical and hospital care.	Does research and prepares a report on Congressional legislation for a comprehensive national health insurance plan that would

A full national health insurance plan, as supported by many labor and public officials, would replace most or all of the voluntary plans now operating in this country.

attempt both to pay for and to overhaul the health-care system.

Participates in inviting a representative from a local medical society to join a panel discussion on the question of national health insurance.



Medical Care, Not Insurance

By TOM WICKER

The private health-insurance industry has testified to a Senate subcommittee that a national system of medical care should be administered through private health-insurance companies—naturally.

This comes at a crucial moment. President Nixon is proposing a medical care plan, another is being offered by Senator Edward Kennedy and backed by a hundred congressional sponsors, and the redoubtable Wilbur Mills of the Ways and Means Committee not only is devising his own health scheme but also is scheduling it for consideration ahead of Mr. Nixon's revenue-sharing program. That kind of activity almost certainly will result at last in a national medical care program, which is long overdue.

Why should such a program, which in any form will require a considerable investment of taxpayers' money, necessarily be administered through private insurance companies? Many of them have dubious records of service, not all offer policies that even come close to paying most medical expenses, and the number and variety of them would require in any case a considerable degree of Federal regulation.

Any way you look at it, the imposition of private profit-making companies on a national medical plan would impose another layer of costs. Industry representatives conceded to the subcommittee that the overhead costs of private health insurance policies amount to about half the premiums charged to individual subscribers. If taxpayers are to support the national health, must they also support the profits of private companies?

On the other hand, presumably, no one would object to the profits, nor would anyone mind private company administration, if indeed a higher level of medical care and a more efficient and effective administration of the program would result.

It is hard to argue, for instance, that instead of private companies there should be a new Federal medical care bureaucracy, with its associated state and regional bureaucracies—although the one clear analogy is to the Social Security Administration, which even the private insurance industry considers to have done an excellent job in administrating Old Age and Survivors Insurance.

It is true, moreover, that building private insurance firms into a national medical care structure would place a screen between the Government and the doctors—so that the latter would have what many of them consider an essential freedom from bureaucratic regulation, and the opportunity to continue in an essentially private practice of medicine.

This leads to a third possibility—that both from a taxpayer's and a doctor's point of view, sensible study of the problem may suggest that there is a lot to be said for those who can afford it to continue paying for their own medical care through private insurance, much as they do now, as long as that does not interfere with or diminish the ability of the less affluent to get adequate medical care when they need it.

All of these things may be true. What is not true is that private insurance has some inherent place in the medical care system—that the doctrines of free enterprise or private medicine or the survival of the fittest create an inalienable right for private companies to make money in the medical care business.

In fact, once the idea of a national medical-care system is accepted, only two principles ought really to be considered immutable. The first is that everyone should get the medical care he needs, when he needs it, for as long as he needs it, unhampered by his lack of ability to pay (either medical care charges or insurance premiums); and the other is that the quality of that medical care should be as high as possible.

These ideals can hardly be reached overnight, and perhaps never fully can be. Achieving medical care for all, for instance, probably would make it harder to maintain high standards of medical care. But Congress and the Administration ought to keep in mind that their task is to devise the most effective national medical care plan—not a private insurance scheme. The latter will be useful only to the extent that it helps realize the former.

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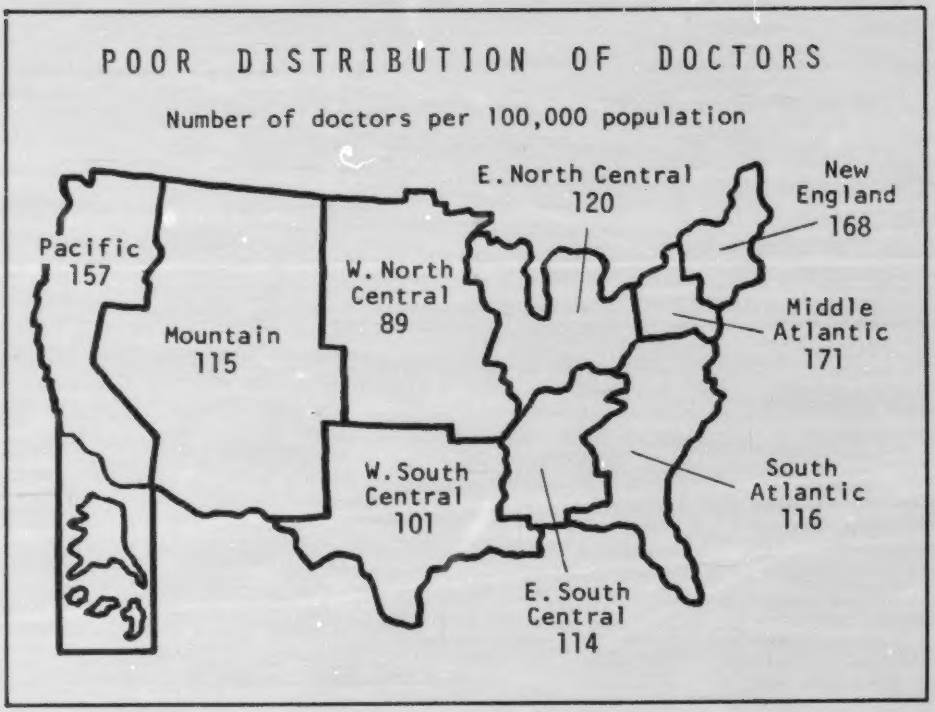
CLASS ACTIVITY

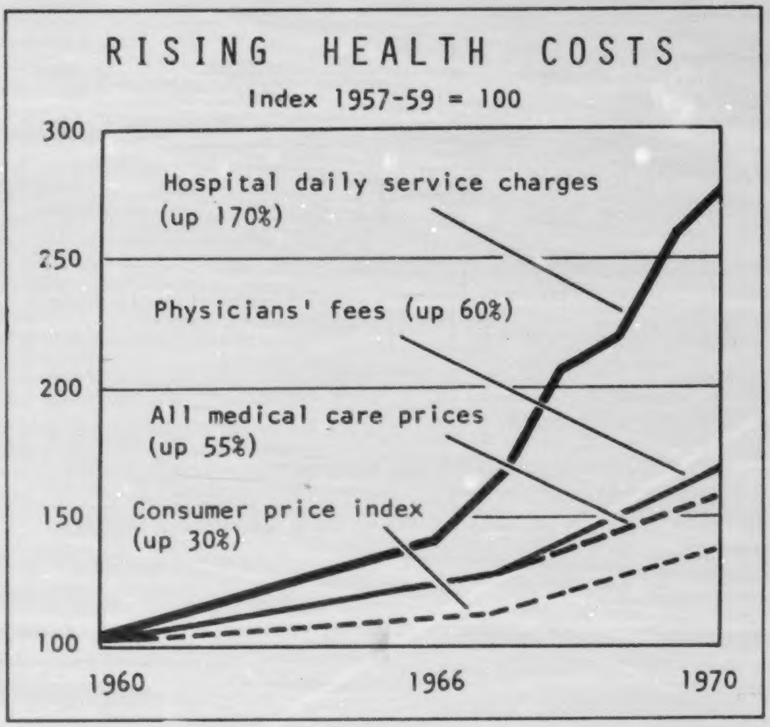
Panel discussion on the advantages and disadvantages of having a national medical care program administered through private insurance companies.



POOR DISTRIBUTION OF DOCTORS

Number of doctors per 100,000 population

Pacific
157
Mountain
115
W. North
Central
89
E. North Central
120
New
England
168
Middle
Atlantic
171
South
Atlantic
116
W. South
Central
101
E. South
Central
114



RISING HEALTH COSTS

Index 1957-59 = 100

Myth and Reality:
Problems of Health Care

By ELLIOT L. RICHARDSON

WASHINGTON–Social issues are often shrouded in myth and misconception. As an example, for too long it was popularly believed that fathers of welfare families irresponsibly abandoned their wives and children to live carefree, devil-may-care lives financed by the public's largesse. But careful analyses by social scientists revealed that, in fact, able-bodied men on welfare were often forced by the system to leave their families.

Health care in the United States is a current example of a vast social issue encrusted with a layer of invention and illusion. We all know there is something wrong with the current health care system, and it is commonly held that too few doctors, greedy insurance companies, and an apathetic government are at fault. But are these the real problems? Does such conventional "wisdom" mislead us to propose inadequate solutions to complex problems? Let us examine some of the nation's health myths in order to see the Administration's health proposals in light of the true problems behind them.

Myth: The United States is the only major industrial nation in the world that does not have a national health service or a program of nationalized health insurance. This claim was made last month on the floor of Congress, and the idea is widely shared, even among some health "experts." Those who hold this view seem to have in mind the British and Eastern European model in which health services are paid for out of general tax revenues. But the British model is not the typical Western European model. In fact, continental health-insurance schemes are predominantly financed by employer-employe contributions and operate within the framework of national standards. This is basically the route the President has proposed that we travel–national health insurace, not nationalized health insurance.

Myth: There is a gross shortage of doctors in America. In fact, we have one of the highest ratios of doctors per capita in the world–and the number of physicians is growing at a rate faster than the population. The basic problem is maldistribution. There are too few doctors in the ghettos, in rural America and in the primary care disciplines, such as general practice and pediatrics, while there is no real shortage of doctors in suburban practices or in certain specialties like surgery. To meet this paradox of scarcity amid plentitude, the Administration has proposed incentives to bring doctors to the areas and types of practices where they are most needed.

Myth: It is better doctoring that is making us a healthier nation. In fact, infant mortality rates have declined and longevity has increased due largely to better nutrition and sanitation, higher income, and improved education. For example, when we replaced the horse and buggy, the death rate of infants and children fell because of an accompanying decline in fatal diarrhea caused by animal filth. In recognition of these interrelationships, the Administration has proposed efforts to clean our environment, provide a basic income for poor families, provide adequate nutrition, and make education available to more people. In truth, the Administration is concerned about health and not only medical care. That is one reason why we feel that very expensive federally financed health insurance schemes may, in fact, preempt too large a share of Federal tax revenues for medical care, when a more balanced approach would better achieve health goals.

Myth: Insurance companies are getting fat on health insurance. In reality, these companies on the average have retained less than 6 per cent of premiums for administrative overhead and profit on group health insurance. The Administration's choice to build upon the present strengths of our system was based on a desire to reform, not dismantle, our health care institutions. We see no need to create another mammoth bureaucracy in response to the misconception that we are making the rich richer.

An Old Saying: "An ounce of prevention is worth a pound of cure." Not all ancient wisdom is myth. Prevention is a more satisfactory solution than cure. It can be demonstrated that significant improvements in our health status will come about more through prevention of accidents and chronic disease than through improvements in curative medicine. The President's proposed health education, accident prevention, and biomedical research programs are targeted at those areas of prevention where we can hope to have the greatest success.

With our health program we have attempted to eschew the simple, grant solution, which often turns out to be both expensive and misdirected. A hallmark of a responsible government is the ability to distinguish between sound reasoning and chimeras.

Elliot L. Richardson is Secretary of Health, Education and Welfare.

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CLASS ACTIVITY

Have class committees prepare an evaluation of each health care "myth" presented by Elliot L. Richardson, Secretary of Health, Education and Welfare.

ENVIRONMENTAL and COMMUNITY HEALTH

Grade 8

Generalizations

MAN'S HEALTH AND WELL-BEING ARE RELATED TO HIS INTERACTION WITH THE ENVIRONMENT. 238

AIR POLLUTION, A SERIOUS PUBLIC HEALTH PROBLEM, IS A PRODUCT OF INCREASED POPULATION AND HEAVY INDUSTRIALIZATION. 238

WATER POLLUTION, A MENACE TO OUR HEALTH AND A THREAT TO THE ECONOMY, CONTRIBUTES TO THE EVER-GROWING PROBLEM OF WATER SHORTAGE. 242

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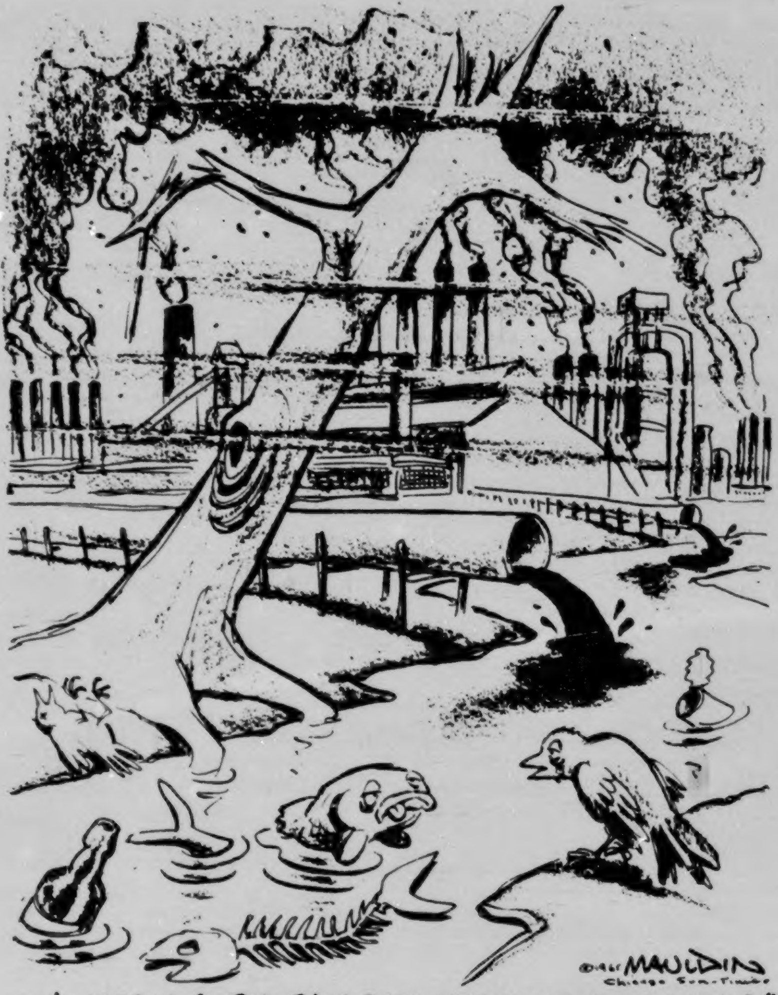
CONTINUOUS USE OF RADIATION OR RADIOACTIVE MATERIAL PRESENTS NUMEROUS POTENTIAL HEALTH HAZARDS. 248

MAN'S HEALTH AND WELL-BEING ARE RELATED TO HIS INTERACTION WITH THE ENVIRONMENT

Content	*Suggested Student Activities*
Man's health and well-being are influenced greatly by his environment.	Brings to class newspaper and magazine articles that relate directly to current environmental changes. Discusses their contents.
Many physical, biological, and social factors affect health and create need for adjustments and controls.	Indicates why environmental changes are taking place faster today than in years past.
Human ecology is the science which studies the relationships of man interacting with his total environment (physical, biological, and social).	Compares environmental conditions of city and rural living.
Physical environment (air, soil, water) may favorably or unfavorably influence man's health status.	Lists and describes ways in which the physical environment affects one's health status. Includes both favorable and unfavorable effects.
Biological environment (plants and animals) may be either beneficial or harmful to health.	Reads and reports on beneficial or harmful effects of microbes to man's health.
Social environment (scientific and technological advances), although contributing to man's improved standard of living, has had a serious harmful effect on natural resources.	Describes how man's advances have created new kinds of ecological problems.

AIR POLLUTION, A SERIOUS PUBLIC HEALTH PROBLEM, IS A PRODUCT OF INCREASED POPULATION AND HEAVY INDUSTRIALIZATION

Content	*Suggested Student Activities*
From birth to death, man is completely surrounded by air. It is one factor in man's environment to which he is continuously exposed.	Views films, such as *Air Pollution—Everyone's Problem* or *The First Mile Up.*
Air is a mixture of a number of gases. It consists of about 78 percent nitrogen, 21 percent oxygen, and a very small amount of carbon dioxide.	Records the result of one week's observation of the environment, noting the following: Kinds of air pollution Sources of air pollution Suggestions for controlling air pollution
COMMON AIR POLLUTANTS	
Particulates, small particles of such substances as carbon, soot, and fly ash, settle on clothes and houses and are breathed into the lungs.	Demonstrates pollution in the air by attaching a facial tissue over the end of a vacuum cleaner hose and allowing the cleaner to run



"IT'S GETTING SO BAD THAT EVEN PEOPLE ARE COMPLAINING."

Copyright © 1965 Chicago Sun-Times, courtesy of Wil-Jo Associates, Inc., and Bill Mauldin

DISCUSSION QUESTIONS

1. How does this cartoon support the idea that history of life on earth has been a history of interaction between living things and their surroundings.
2. Describe how this cartoon supports the following view expressed by Rachel Carson in her book, *Silent Spring* "Only within the moment of time represented by the present century has one species—man—acquired significant power to alter the nature of the world."

Content

Sulfur dioxide, product of incomplete combustion of oil and coal, attacks the lungs and other parts of man's respiratory system.

Carbon monoxide, a tasteless, odorless, and colorless gas most often associated with the automobile exhaust, combines with blood to form a poisonous substance.

Hydrocarbons, emitted from motor vehicles, have an injurious effect on certain body cells.

Nitrogen dioxide, formed in all burning processes, is a serious irritant when pollution levels are high.

Photochemical smog results from the reaction of sunlight upon various polluting substances: is the kind of smog that has affected Los Angeles.

MAJOR CAUSES OF AIR POLLUTION

Burning of fuels for heat and power in automobiles, power plants, and home and industrial furnaces

Burning of refuse, leaves, and other wastes

Public works activities, such as road building and street sweeping

Construction projects, such as new buildings

Use or production of chemicals, radioactive materials, and abrasive dusts as part of certain industrial processes

EFFECTS OF AIR POLLUTION

Air pollution's major effect on health appears to be the result of irritant materials acting on the respiratory tract and other tissues.

Certain irritants, either gaseous or particles, may slow down and even stop the action of the cilia in the respiratory tract, thus leaving the sensitive underlying cells without protection.

Chronic cardiorespiratory diseases may result from air pollutants. Pollutants cause constriction of the airways or airway resistance (the narrowing of air passages), thus making breathing difficult.

Suggested Student Activities

for ten minutes or more. Compares the tissue with an unused one.

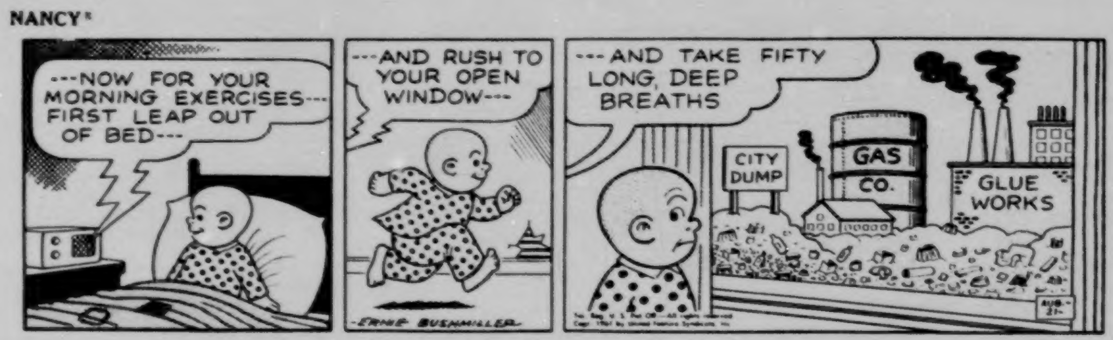
Using the science department as a resource, participates in setting up a demonstration to show the effects of common pollutants on the body.

Reads and reports on the relationship between air pollution and auto accidents.

Participates in a panel discussion on the problem of restricting traffic in and out of business districts during rush hours.

Observes and reports about sources of air pollution in the community. Indicates steps that can be taken to stop pollution in the community.

Participates in inviting the school physician to discuss roles air pollution plays in the progress of such diseases as asthma, emphysema, lung cancer, and chronic bronchitis.


NANCY
---NOW FOR YOUR MORNING EXERCISES--- FIRST LEAP OUT OF BED---
---AND RUSH TO YOUR OPEN WINDOW---
---AND TAKE FIFTY LONG, DEEP BREATHS
CITY DUMP
GAS CO.
GLUE WORKS
ERNIE BUSHMILLER

© 1961 United Feature Syndicate, Inc.

DISCUSSION QUESTION

What do you think is going through his mind as he looks out the window?

Content	*Suggested Student Activities*
Bronchial asthma is a kind of airway resistance which is caused by an allergy. Polluted air is one of the factors known to bring on an asthma or asthma-like attack.	Discusses why the campaign against cigarette smoking and the campaign for cleaner air are both part of the same overall problem of safeguarding the nation's health.
Chronic bronchitis symptoms are increased on those days when the level of air pollution is high.	
Pulmonary emphysema is a breakdown of air sacs in the lungs. Although no single factor can be said to be the original cause of emphysema, it is recognized that the symptoms of emphysema are aggravated by air pollution.	
Lung cancer cannot be attributed to any single cause. It seems very likely, however, that air pollutants (together with other factors, especially cigarette smoking) contribute to the development of this disease.	Does research and reports on the rate of lung cancer in nations, such as Norway, which have low air pollution levels. Compares the rate of lung cancer in Norway with that of the United States.
Heart disease seems to be a more serious problem in areas where air pollution levels are high. Studies have shown that there is a higher death rate from heart disease in such areas. One reason might be that the heart's burden is increased by carbon monoxide, which can reduce the oxygen content of the blood.	Reads and reports on the effects of the 1952 London smog on persons suffering from heart disease or chronic respiratory diseases.

CONTROL OF AIR POLLUTION

Content	*Suggested Student Activities*
In recent years, efforts to control air pollution have become more organized.	Reads and reports about the Federal Air Quality Act of 1967.
New York City, recognizing that the need for clear air is urgent, has embarked on a five-year plan to achieve substantial reduction of the 1966 pollution levels.	Participates in communicating with the Department of Air Resources of the New York City Environmental Protection Administration for information on local programs to reduce air pollution.
Greater efforts must be exercised to control pollutants from homes, industry, public works, and motor vehicles.	Participates in contacting the local office of the National Tuberculosis and Respiratory Association for information about communtiy programs to fight air pollution. Reports to class.
Home heating appliances, using gas, oil, or coal, should be maintained and operated in ways that will prevent the production of dangerous pollutants. Only approved incinerators should be used for the disposal of refuse.	Participates in surveying the community to determine the number of buildings in which incinerators have been adapted to reduce air pollution.
Industry should use the best possible devices for the operation and maintenance of equipment so that pollution is held to a minimum.	Reads and reports on measures that can be taken by industry to stop air pollution. Indicates why, in past years, industry was seemingly unconcerned with environmental conditions.
Public works should be operated with the same attention to pollution control as that applied to home and industry.	Prepares anti-pollution posters for class or school display, using slogans such as "What Ever Happened to Clean Air?"
Motor vehicles produce about half the pollutants in the air. Government and private research programs are working toward the development of a pollution-free automobile.	Does research and reports about the use of exhaust control systems on motor vehicles. Indicates what the federal government is doing to control air pollution from automobiles. Participates in writing to automobile manufacturers to express concern about air pollution caused by motor vehicles.

WATER POLLUTION, A MENACE TO OUR HEALTH AND A THREAT TO THE ECONOMY, CONTRIBUTES TO THE EVER-GROWING PROBLEM OF WATER SHORTAGE

Content	*Suggested Student Activities*
Ancient civilizations owed their greatness to water and waterways.	Lists some great ancient civilizations and indicates how their greatness resulted from

Egypt owed its greatness to the waters of the Nile, and Babylonia to the waters of the Tigris and the Euphrates.

Like air, which has a substantial ability to cleanse itself of pollution, a swiftly running river or lake can also cleanse itself of a reasonable deposit of sewage and plant, animal, human, and industrial wastes. However, when the amount of waste dumped into a waterway becomes too high, that waterway becomes polluted.

EFFECTS OF WATER POLLUTION

Water which is polluted is unfit for drinking.

Polluted water cannot be used for irrigation.

Water pollution results in the death of marine life causing lakes to become eutrophic, that is, they have too little oxygen. Such lakes, thus, age before their time.

Diseases caused by polluted water include:

> *Cholera*, a still-dreaded disease in Asia, may be traced to impure water.
>
> *Infectious hepatitis*, a disease of the liver, appears to be increasing in this country. There seems to be mounting evidence that polluted water may be a contributing cause.
>
> *Typhoid fever*, an infectious disease, may be spread through water polluted with sewage.

Water shortage may result from polluted water.

> As cities grow and as standards of living rise, the amount of water needed will likewise increase.
>
> With the increasing need for water, there is an increasing pressure on the existing water supply and on the need to find new sources of pure water.
>
> The amount of water needed by industry and for agriculture will grow during the next decades.
>
> Because so much of our water has become unfit for use, communities are in danger of losing their water supply.

the availability of water.

Writes a paper contrasting the sanitary practices of today with those of a century ago. Includes the need for increasing emphasis on sanitation in the future.

Views films, such as *Water* (United Nations film).

Discusses how ground water and streams may contribute to the spread of pollution. Indicates some ways in which a polluted body of water may be restored to a potable condition.

Reads and reports about the problem of detergent pollution and attempts to remedy it.

Selects one of the major waterborne diseases and writes a paper on the cause and control of the disease.

Discusses why there was a terrible outbreak of cholera and typhoid fever after the devastating cyclone in East Pakistan in 1971.

Lists and discusses ways in which people use water. From this list of uses, estimates an individual's daily water consumption in gallons. Multiplies the estimate by 365 days and then multiplies this product by the population of the United States. (Note that this total is only a portion of all water used since it does not reflect industrial uses of water.) Indicates factors which will determine the amount of water used and how we can assure a sufficient water supply for future generations.

Discusses ways of avoiding water waste at home.

CONTROL OF WATER POLLUTION

Water pollution can be controlled by the enforcement of regulations designed to prevent contamination.

The Federal Water Pollution Control Act of 1956 permits the federal government to join local governments in financing sewage treatment facilities.

Interstate commissions are being formed to meet problems that extend across state lines.

Cities have the responsibility of developing efficient means of purifying their water supply.

Water pollution may be controlled by removing or recycling wastes.

Saving water by removing wastes is essential since, with the growth of the nation, providing a sufficient supply of clean water has become a major health problem.

Cities have the responsibility of improving their facilities for the disposal of waste.

Construction or extension of sewer lines must match the growth rate of our cities.

Plays a role depicting a situation in which experts on water pollution indicate the extent of the problem to a committee of legislators who are studying the water pollution problem.

Participates as a member of a committee to report about local problems of water purification and conservation.

Using a source such as *Sanitary Landfill*, reads and reports about landfill as a controlled method of refuse disposal.

A New Plan To Rid Earth of Waste

SEATTLE (AP)–There's a way to get rid of solid waste so it won't be seen again for at least 50 million years, two University of Washington professors say.

Dr. Robert C. Bostrom of geological sciences and Dr. Mehmet A. Sherif of civil engineering think the massive power that moves continents could be harnessed to send garbage and trash deep into the earth.

They suggest that waste which cannot be recycled economically be compacted to make it heavier than water and then sunk in ocean trenches, the earth's deepest places.

These trenches are not only deep, but their bottoms are driving deeper into the earth, they say, as the downward wrinkles in the earth's crust are pushed toward the interior.

The professors say anything dropped into the trenches will, with geologic slowness, be carried many miles into the earth.

"These trenches are the only places on earth where things go down," Bostrom said. "No matter where else you put something–in a mine, on the ordinary ocean bottom–eventually it will come back."

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DISCUSSION QUESTIONS

1. Why is the problem of getting rid of wastes becoming increasingly difficult?
2. What can students do to help in this matter?

Wastes To Be 'Recycled'

By JOHN CUNNIFF

The word "recycle" has barely made many dictionaries, so recent is its coinage, but no dictionary of the future will be able to ignore it. Neither will most industries or consumers.

Simply stated, recycling means the reprocessing of used materials and waste into something saleable or at least, to come extent, reusable. The concept isn't entirely new, but the scale of its possible use could be revolutionary.

Revolutionary in this sense, that it quite likely will mean the beginning of the end for the throwaway society, a life style that condones the belief that a perfectly good product could be thrown away after one use, without adverse consequences.

Now, with a good deal of the environment polluted, industry and society know that they cannot forever take natural resources from the earth and redeposit there the unnatural products of man.

Instead, it is becoming generally understood, society will have to reprocess its old materials into new ones, constantly keeping them in use rather than permitting them to accumulate anywhere as waste.

Among the motivations:

–The environment is being polluted. Aluminum and steel cans, glass bottles, tires, industrial bulks of various materials, papers, oils are befouling the earth, sky and water.

–Many conventional disposal methods, at best, substitute one form of pollution for another. Old tires can be burned out at the expense of clean air. Household garbage can be hidden from sight, but often at the expense of clean water.

–The nation is threatened, sometime far in the future if not soon, with a depletion of some raw materials. Total depletion, once foreseen as imminent, may still be far off. But under present methods, some feel, it might be inevitable.

–The conscience of good business, which orders that expenses be kept down and that profit-making opportunities be seized, has become distressed by waste. It is now seeking to convert the problem into an opportunity, albeit prodded by the law.

An imaginative proposal was presented recently in the form of plans for a plant whose raw materials would be nothing but garbage and whose product would be almost nothing but reusable materials and energy.

The Aluminum Assn., its own self interest dictating that it become involved, turned over the plans to the new National Center for Solid Waste Disposal, a non-profit corporation created in Washington recently by industries whose products contribute to the problem.

This plant would take garbage and run it through various processes to recover materials that are now thrown away. Aluminum waste would come out as aluminum granules which the operator could then sell back to the industry.

Glass bottles would emerge as a special kind of gravel, steel would be sifted out and reshaped as raw material, paper would be reworked into pellets for new paper, plastics and vegetable wastes would be processed into fuels.

Ideally, the only product of the plant would be clean water, and valuable materials and energy that a municipality could use itself or sell. The facility could, for example, also serve as a power plant.

But the demonstration plant must be built first, and nobody so far has come up with a plan for that. Engineering drawings have been made but the blueprints haven't been inked. The Association estimates it would take two years and $15.8 million to bring the idea to reality.

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DISCUSSION QUESTIONS

1. What is meant by recycling?
2. What types of materials can be recycled?
3. Why is recycling becoming increasingly important in our fight against pollution?

CLASS ACTIVITY

Plan a project for educating the community on the importance of recycling wastes.

Content

Suggested Student Activities

Existing sewage treatment plants in large cities must be updated to adequately handle domestic sewage and industrial wastes.

Waste treatment methods must be found which will clean up water at a reasonable cost.

Scientists are attempting to develop the technology of recycling the bulk wastes. This involves taking materials that once benefited society and making them benefit society again.

WIDESPREAD USE OF CHEMICALS IN COMBATING PESTS HAS CREATED ADDITIONAL ENVIRONMENTAL HEALTH HAZARDS

Content

Pesticides protect health. Their earliest use was to control diseases such as malaria, yellow fever, typhus, and plague.

Pesticides have also been valuable in protecting plants. By destroying the pests that attack crops, farmers are able to provide food of wider variety, higher quality, and lower cost.

By helping to keep the food supply ample, pesticides have aided in reducing the incidence of food-deficiency diseases such as pellagra, scurvy, and rickets.

HAZARDS OF PESTICIDES

A potential danger of pesticides is accidental ingestion and poisoning, either by swallowing or inhalation.

Public Health officials are concerned about the possibility of long-term ill effects which could result from contamination of air, water, food, and soil by improper use of pesticides.

Samples of food and water are routinely examined. If residues in a food go beyond a specified limit, that particular food product cannot be sold.

Suggested Student Activities

Participates in one of two panels of students, one to present the values of pesticides, the other, the possible health hazards associated with the use of pesticides.

Reacts to the following argument of food producers: We cannot possibly feed the growing nation or produce raw materials for its needs without a large program of chemical control.

Using Rachel Carson's *Silent Spring* as a source, reports on how this book brought public attention to the manner and extent to which pesticides have been used.

Participates in inviting a representative from the regional office of the Food and Drug Administration to explain its role in protecting the consumer from food products contaminated with chemicals.

Content

PROPER USE OF PESTICIDES

Where pesticides are to be used by the individual in the home or in the garden, the United States Public Health Service recommends the following precautions:

Read the label each time you use a pesticide
Follow label directions exactly
Keep pesticides away from young children

Suggested Student Activities

Using a source such as *Pesticides*, reads and reports on the proper use of pesticides.

NOISE POLLUTION, WITH ITS POTENTIAL EFFECT ON HEALTH, HAS BECOME AN IMPORTANT ENVIRONMENTAL PROBLEM

Content

EFFECTS OF NOISE

Studies have shown that persons exposed to noise levels exceeding 85 decibels may have a slight shift in their hearing threshold.

Noise, measured in decibels, may have other effects on the body, such as the following:

Thought processes and speech communication may be interfered with by noise.

Mental and motor tasks may be interfered with in situations where noise levels keep changing, as in offices near railroad tracks.

Physiological factors are affected where noises are loud and unexpected, as in blasting operations. There is a rise in blood pressure and an increase in breathing rate.

Suggested Student Activities

Discusses the controversy over the development of the supersonic transport (SST). Indicates how this is related to the problem of environmental pollution. (Resource: "*SST Duel at Mach 3*," by H. Johnson.)

Reacts to the suggestion that rock concert program guides as well as record and tape labels should read: "Caution: Loud Music May Be Hazardous to Your Hearing."

NOISE CONTROL

Every community needs a planned anti-noise campaign.

Industry and the public must be made aware of the physical, mental, and emotional consequences produced by noise.

Legislation is necessary for providing restriction and control on noise.

Lists potential sources of excessive noise in home, school, and community.

Discusses the potential danger to hearing from noise in the local environment and ways in which noise levels might be reduced.

Participates in a committee to contact organizations, such as Citizens for a Quieter City for suggestions on ways to reduce noise in the community.

CONTINUOUS USE OF RADIATION OR RADIOACTIVE MATERIAL PRESENTS NUMEROUS POTENTIAL HEALTH HAZARDS

Content	*Suggested Student Activities*
Man has been exposed to mild radiation since life on earth began. In this nuclear age, exposure to radiation has increased. But controlled atomic force will provide the reservoirs of energy needed to sustain the world population in the future.	Reads *The Natural Radiation Environment* and reports about radiation, its source, and how it is measured.
SOURCES OF RADIATION	
Natural sources of radiation are common. These include: Outer space (cosmic rays) Sun (infrared and ultraviolet rays) Earth's crust (radioactive elements, such as uranium and radium)	
Radiation exposure may come from the following: X rays Certain medical examinations Industry Space exploration	Reads and reports about uses of radiation in the treatment of cancer.
Radioactive fallout from the testing of nuclear weapons is another source of environmental contamination. Despite the Test Ban Treaty, fallout from previous tests will continue for many years.	
Radioactive wastes are a recent source of water pollution. These wastes get into water from uranium mining, atomic reactors, hospitals, and certain types of industry. At the present time, the level of discharge of radioactive wastes into our streams is considered to be safe. However, if the rate should increase, the consequences to health could be serious.	
HEALTH HAZARDS	
Continued use of radiation or radioactive materials presents numerous health hazards.	Reads and reports about the acute and chronic effects of radiation on human health.
The amount of damage to the body from radiation depends on the amount of radiation	Reads and reports on the possible genetic effect of exposure to radiation.

received, duration of exposure, amount of body exposed, and the age and general health of person exposed.

Any reasonable number of X rays taken during a lifetime will not endanger one's health.

Ill effects from radiation result when the cumulative exposure during one's lifetime, from all sources, reaches a certain level.

Most individuals always remain within safe limits of radiation.

Milk, food, and water are checked to determine if any radioactive materials are present.

Skin disorders, loss of hair, cancer, leukemia, birth defects, and genetic changes have been linked with excessive radiation.

Acute radiation sickness, which can result in death, might occur if an individual is exposed to a high-level dose of radiation.

CONTROLLING EXPOSURE TO RADIATION

The degree of exposure to radiation is lessened and protection is achieved by shielding, distance, and time.

The Division of Radiological Health of the United States Public Health Service maintains a large number of sampling stations in many parts of the country to check on radioactive fallout.

Indicates why damage to the chromosomes from exposure to radiation might show up as defects in later generations.

ENVIRONMENTAL and COMMUNITY HEALTH

Grade 11

Generalizations

MAN'S EXPANDING ENVIRONMENT IS ADDING NEW HAZARDS TO HIS HEALTH. 252

UTILIZATION OF COMMUNITY HEALTH RESOURCES BENEFITS THE HEALTH OF THE INDIVIDUAL AND THE COMMUNITY. 258

NATIONS ARE DEPENDENT UPON ONE ANOTHER TO PROMOTE HEALTH AND TO SOLVE HEALTH PROBLEMS. 261

MAN'S QUEST FOR KNOWLEDGE IS OPENING UP NEW HEALTH CAREER OPPORTUNITIES. 265

MAN'S EXPANDING ENVIRONMENT IS ADDING NEW HAZARDS TO HIS HEALTH

Content

In addition to the problem of pollution, society is faced with problems of population growth and housing.

The capability of society to respond quickly and effectively to these new problems may very well determine man's survival.

Although improved technology has resulted in a better way of life for man, it has also created a more serious threat to his well-being.

Suggested Student Activities

Discusses why we might consider our current environmental health problems as an outgrowth of man's progress.

Discusses the following excerpt from *Crime in America* by Ramsey Clark:

> **Through technology this generation first liberated mankind from bondage to nature. The question now is whether technology will in turn master man. If human reason and purpose can control technology, they can enrich the human condition.**
>
> **. . . . Population control, health knowledge, human usefulness, wholesome environment and beauty can be achieved through change. For all the problems change creates, its opportunities exceed them many times over.**
>
> **There have never been people at any time in history who so clearly and abundantly possessed the potential to meet all of their problems and provide for all of their needs as do Americans today. We do not release half the energies of our people. Through technology we can build new cities—clean, ample and beautiful. We can educate, employ and fulfill all of our people.**

THE POPULATION PROBLEM

For the first time in history, the extent and rapidity of population growth has become a critical world problem.

Two-thirds of the world's inhabitants are poor and often hungry; this proportion is expected to increase substantially.

If mankind continues to reproduce at the present rate, world population will double by about the year 2000. If that happens, a population of about 7 billion will be making twice the demands on the earth's resources (air, water, and minerals) than is being made today.

During the 600,000 years of the Old Stone Age, population increased at the rate of two percent every 1,000 years. Today it is growing at the rate of two percent every year.

In the past, man had two major concerns regarding population.

The first, characterized by the need to be fruitful and to multiply, lasted throughout

Views films, such as *Population and Pollution.*

Reacts to the following statement made by U Thant, former Secretary-General of the United Nations:

> **The most urgent conflict confronting the world today is not between nations or ideologies, but between the pace of growth of the human race and the insufficient increase in resources necessary to support mankind in peace, prosperity, and dignity.**

Participates in a committee to contact the World Health Organization for information concerning programs dealing with world population and nutrition.

Calculates the increased growth rate of population since the Old Stone Age.

Reacts to the statement: Man can solve today's and tomorrow's population problem only if he shakes himself free of attitudes about childbearing that helped him to endure for thoumost of the time that man has been on earth.

The second, characterized by the need for restraint in human reproduction, has occurred very recently.

The old attitude of raising large families was based on the need for more help for the family. Moreover, for years, famines, plagues, and wars combined to cut down vast members of young people.

As recently as 1918, following World War I, the most deadly influenza epidemic in history was responsible for the death of 20 million people.

Technical and medical progress in recent centuries upset the long standing equilibrium between high birth rates and death rates. Death rates have made a steady decline while birth rates have remained high.

By the late 19th century, people in some western European nations chose to control their birth rate through the use of contraceptive methods. By 1930, the transition to a new pattern of low death rate and low birth rate took place.

This pattern of low death rate and low birth rate does not yet exist in the developing nations of the world. In parts of Africa, Asia, and Latin America, where death control has been greatly improved since World War II, the birth rate remains as high as ever or higher.

Overpopulation with its serious problems will continue unless birth rates and death rates are brought into balance.

At the Lambeth Conference of 1958, the Church of England decided that Christian couples could, with a clear conscience, practice contraception, if it were acceptable to both and did neither individual any harm. This position had far-reaching influence on Protestant clergy throughout the world.

sands of generations.

Views filmstrips, such as *Environment of Man.*

Does research and reports about Malthus's theory concerning population and food supply. Indicates whether it was correct and why, and whether, in terms of existing environmental conditions, it has renewed significance today.

Discusses how medical progress over the centuries has resulted in a declining death rate.

Reacts to the following statement by Lord C.P. Snow:

> **I have to say I have been nearer to despair this year than ever in my life. We may be moving, perhaps in ten years, into large-scale famine. Many millions of people are going to starve. We shall see them doing so upon our television sets.**

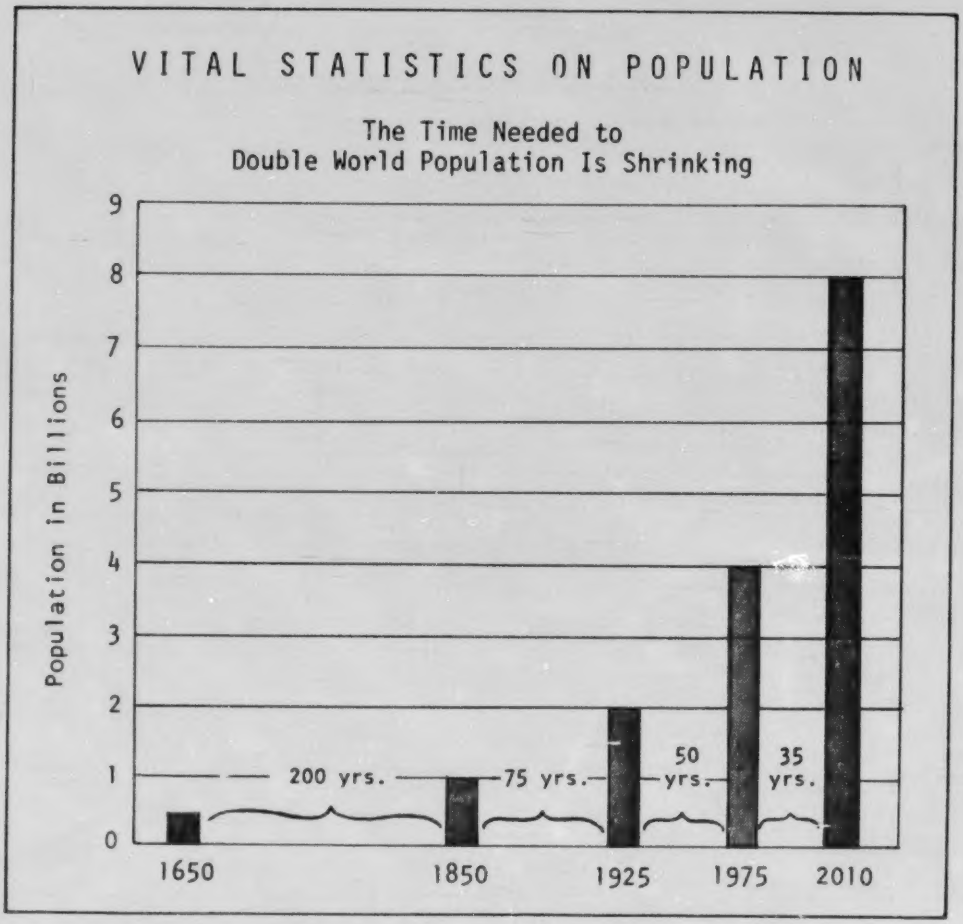
Discusses why it might be said that the essence of the population problem is the quality of human life throughout the world rather than mere survival.

Indicates how the goal of zero population growth, set by groups concerned with overpopulation, relates to a balance of birth rates and death rates.

Using a source such as *The Churches Speak up on Birth Control*, reads and reports on religious attitudes regarding family planning.

LIFE EXPECTANCY AT BIRTH

Time	*Years*
Early Iron & Bronze Age	18
Roman Empire	22
Europe: Middle Ages	35
United States: 1900	49
1968	
Europe, North America	70
Africa	43
Asia	50
Latin America	60



VITAL STATISTICS ON POPULATION

The Time Needed to Double World Population Is Shrinking

Although some religious and lay groups remain opposed to contraception, many others believe that there is nothing immoral about limiting children for the good of the entire family.

In 1963, Pope John XXII appointed a commission composed of both clergymen and laymen to investigate the matter of birth regulation. In 1968, Pope Paul VI reaffirmed traditional church doctrine in opposing changes to permit Catholics to use contraception.

Voluntary organizations, such as the Population Council, the International Planned Parenthood Federation, and the Ford and Rockefeller Foundations, are vitally concerned with the issue of family planning.

Reacts to the following statment made by Robert S. McNamara, President of the World Bank and former U.S. Secretary of Defense:

> The population problem will be solved one way or the other. Our only fundamental option is whether it is solved rationally and humanely—or irrationally and inhumanely. Are we to solve it by famine . . . by riot, insurrection, violence, wars of expansion and aggression? Or are we to solve it in accord with man's dignity?

Extending Family Planning

The nation's population has been officially put at 204,765,770 as of last April 1, an increase of about 24 million over the figure of a decade ago. In 1917, as President Nixon recently pointed out in a special message on population problems, the total number of Americans passed 100 million after three full centuries of steady growth. A mere half-century later, in 1967, the 200-million mark was passed.

"If the present rate of growth continues," said the President, "the third hundred million persons will be added in roughly a thirty-year period. This means that by the year 2000, or shortly thereafter, there will be more than 300 million Americans."

In the past, new levels of population growth have been greeted with cheers by all except for a very few who shared a Malthusian gloom. It has been considered this nation's manifest destiny to grow, in territory and in population. For the first time now, this attitude is changing as more and more Americans have come to understnad that, at some point, a finite amount of land and water can comfortably accommodate only a given number of human beings.

"Our spacecraft called the Earth is reaching its capacity," said Dr. Lee A. DuBridge, former science adviser to President Nixon. So, too, is the nation.

Both Senate and House have recently approved the first major Federal family-planning legislation. Similar bills, which there should be no difficulty in reconciling in conference, provide increased financial help for family planning services and for birth-control research. Responsibility for all family-planning efforts would be centralized within the Department of Health, Education and Welfare.

This is all to the good, but cities such as New York have special problems, as dramatically pointed out in an analysis of illegitimacy statistics by Henry Cohen, director of the Center for New York City Affairs at the New School for Social Research. Mr. Cohen points out that the number of illegitimate births among women on welfare has risen even more alarmingly, more than tripling in this same period.

The city's pioneering program of having community-oriented workers counsel unwed women in hospitals immediately after their giving birth holds considerable promise. It brings family planning services to those who need these services when they are receptive to them. Unfortunately this program does not reach the teen-ager before a first pregnancy.

No one has yet set an acceptably "ideal" population figure for the United States. But everyone who has pondered the problem at all has concluded that continued population gains are certain to have extremely adverse effects. Family planning programs for all Americans must receive increased attention. Birth-control programs for teen-agers now require priority.

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DISCUSSION QUESTIONS

1. In past years, why was population growth in this country "greeted with cheers"?
2. Explain the significance of the statement: "Our spacecraft called the Earth is reaching its capacity."
3. Why does this editorial urge that birth-control programs for teen-agers be given high priority?

We Must Limit Families By Law

By EDGAR BERMAN

Controlling our population growth by appeal to self-interest or community welfare has been no more effective than it has been in preventing pollution or wage-price escalation. As an issue contributing to most of our major national problems, it is political. To get results it should be handled as such by legislation and government administration.

It is time that Congress considered population growth at least as an equivalent of one of its many sequelae—the environmental cirsis—where every resource of government, industry, and law is now mobilized for an attack which cannot in the long run be successful without controlling its major cause—overpopulation.

The voluntary system of birth control has shown little progress relative to the time, effort, and money put into it. Advocates say it must be given more time, but time is a costly commodity in the contest of population control. So far the tremendous increments of people in the world have not been slowed. The average size of families has remained unaltered. Yet Congress is ready to augment a budgeted 125 million dollars or more with another 267 millions to expand this quasi-failing "system" for another three years.

Though it may be presumptuous to call this generous sum a sop, it is certainly less than a commitment. It may placate birth control advocates while salving the Congressional conscience—but funds without laws will not reduce the population growth rate fast enough.

Congress knows this, but timorously continues to subsidize local clinics and well-meaning academicians. This is no substitute for a strong over-all policy to thwart the individual license to overpropagate. Three million new people each year, crowded into smaller and smaller areas, precludes long-term solutions to some of our most pressing domestic problems. The prevention of overconcentration of people—though rarely mentioned—is in itself a major problem. The longer Congress tolerates this non-policy drift, the harder, costlier, and less reversible it becomes.

One can understand the reluctance of the individual legislator to cope head-on with population control; for though the old moral, ideologic, and religious birth-control ghosts linger only in the darkest corners of the capital today, they haunt the subconscious of our Senators and Congressmen. It may take self-education, courage, and initiative to change this state of mind, but sooner or later they will have to commit themselves.

The present loose system of voluntary family planning might possibly be made to work with a maximum cash incentive and a minumum of law and guidelines; but though it is economically sound, it would be risky in effectiveness and time.

The ultimate necessity of legislation and guidelines for a strong population policy must be faced. Elected officials can no longer evade debating the ideologic issue of whether the individual right to procreate, to the detriment of society, is a basic human right and a fundamental freedom and whether it can be legally halted without damaging the fabric of freedom. The limitation of family size by law seems less an infringement than a boon to individual civil liberty. Yet the ideologic controversy is just as intimidating to our lawmakers as the spurious issue of "religious freedom" which long obstructed even voluntary birth control.

Our Congress is cognizant of the proscription by law of many human inclinations, just as personal, but less devastating to society than careless reproduction. There are many precedents to support legislation to limit population growth. There are surveys which show the public favoring government responsibility in our population dilemma, and there is considerable evidence that the psychological attitude of Americans has adjusted to government intervention in their personal affairs (e.g., Social Security, child care and education, health, unemployment, etc.).

But even more reassuring to the more timid legislator is the surprising acceptance by the public of abortion reforms. This reflects the feeling that population control is more a political credit than a debit today. There seems to be every moral and philosophical justification for legal population limitation; its technical feasibility, its economic relief, and, on balance, its political acceptability.

It need no longer be viewed as a sanctified issue—separate and different—and should be treated no differently than other urgent national issues.

Dr. Edgar Berman, noted research surgeon, served as special assistant on health problems for Vice President Hubert H. Humphrey.

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CLASS ACTIVITIES

1. Have students write a position paper on the issue of compulsory birth control.
2. Compare Dr. Berman's view on the population problem as presented in this article with that of Lord Boyd-Orr (See "Food Enough for Everyone," p. 263.)

THE HOUSING PROBLEM

About 15 million dwelling units in the United States, which serve as housing for over 50 million people, are classified as substandard or have major deficiencies.

The problem of housing encompasses the slums of our large cities, the suburbs that surround them, and the migrant labor camps in rural areas.

Causes of the current housing crisis include:

- Failure to enact and enforce building and housing codes
- Failure to zone residential areas
- Failure to plan for future housing needs

Effects of substandard housing and neighborhoods on health include:

- A toll on physical, social, and mental health on those who must live under such conditions
  - Studies have shown that 40 percent of the mentally ill in state institutions come from slums, and that the juvenile delinquency rate in slums is twice as high as the national average.
- A high infant death rate due to communicable diseases
- A high rate of accidents and fires due to poor conditon of buildings
- A high rate of tuberculosis, pneumonia, venereal, intestinal, and parasitic diseases.

Programs for improving housing should include:

- Elimination of housing which has deteriorated beyond the point of rehabilitation
- Repair and rehabilitation of sound but substandard housing
- Control of new construction
- Careful planning for future housing needs

In addition, solution to the housing problem will require new and expanded local housing programs, stricter enforcement of housing codes, comprehensive community planning, and the creation of an informed and concerned public.

Reacts to the following statement made by a physician regarding the unsatisfactory health level of many in New York City:

> **Man for man, a good building superintendent can do more for the health of most East Harlem families than a doctor. Many of them live through the winters without heat because of boiler failures. This, plus the dirt, garbage and rat and roach infestation that go with poor maintenance, has more impact on their health than any program of ongoing medical care.**

Discusses possible psychological and social effects of substandard housing on those living in such neighborhoods.

Indicates why the Report of the National Advisory Commission on Civil Disorders makes recommendations for urban housing.

Discusses why the problem of lead poisoning is greater in neighborhoods with substandard housing.

Participates in a committee to invite a representative from the Department of Health to discuss its testing program for lead poisoning.

Discusses why there is a high rate of communicable diseases in slum neighborhoods.

Indicates agreement or disagreement with the statement that housing is the single most important unsolved public health problem in America and gives reasons.

Participates as a member of a committee to prepare procedures for community action programs for better housing. Uses the resources of the New York City Housing Authority and/or the New York City Planning Commission. Includes such areas as community health, community appearance, expanded housing, and enforcement of building codes.

Participates in a panel discussion on the relationships between social unrest in the large cities and poor housing.

UTILIZATION OF COMMUNITY HEALTH RESOURCES BENEFITS THE HEALTH OF THE INDIVIDUAL AND THE COMMUNITY

Content	*Suggested Student Activities*
Various agencies are concerned with protecting the health of the community. These include both government and private agencies.	Participates as a member of a committee to visit or write to community health agencies (official, voluntary, and professional) in order to determine the role of each. Prepares a list of questions, such as means of support, organizational structure, types of workers, purposes, specific contributions to health maintenance and improvement of individuals and the community. Reports to class.
GOVERNMENT AGENCIES	
Federal agencies concerned with public health include:	Prepares a report about federal agencies concerned with public health.
United States Public Health Service, established in 1789 by an Act of Congress, was originally organized to care for American merchant seamen. Its present responsibility is to protect and improve national health and to cooperate with other countries and international organizations in solving world health problems.	
The Food and Drug Administration is another branch of the Department of Health, Education and Welfare. It administers the Federal Food, Drug, and Cosmetics Act and enforces laws that regulate the production and distribution of drugs and food in this country.	Prepares a report about the responsibilities of the Food and Drug Administration.
The Atomic Energy Commission controls and supervises the use of radioactive materials in hospitals, clinics, and research laboratories.	Participates as a member of a committee to contact the Atomic Energy Commission for information on methods of supervising radioactive materials and for establishing radiation standards. Discusses the argument made that the determination of radiation standards by the Atomic Energy Commission is a kind of conflict of interest because the very existence of the Commission depends on the nuclear power industry.
The Federal Trade Commission supervises the advertisement of drugs bought over the counter without prescription. It protects the public against medical quackery.	Does research and reports about procedures used by the Federal Trade Commission to prevent misleading or false advertising.
The Department of Agriculture supervises and inspects all meats sold in interstate commerce.	

The Other Pollution–Internal

By PETER BEACONSFIELD

LONDON—The public has at last become conscious of the near-catastrophic proportion of the pollution problem. Few, however, are concerned as yet with the emerging reality of a comparable trend in our internal environment—our bodies.

Internal pollution is occurring in two ways: From the additives and impurities in much of what we eat, drink and breathe; even more disturbing, from the multiplicity of drugs consumed daily by many millions of Americans for other than strictly therapeutic reasons.

Our solution to coping with the stresses and frustrations of urban industrial society tends more and more toward dosing ourselves with one drug or another—largely encouraged and abetted by the advertising media. Pills are available for every contingency—to induce sleep or to prevent it; to reduce weight or build up muscle power; to achieve pregnancy or to avoid it; to ease pain; to relieve tension; to counteract depression; to calm the nerves.

How much permanent damage such indiscriminate imbibing may cause the human system in the long run is still a matter of specualtion. If a parallel can be drawn from the present condition of the external environment, then the pending consequences are all too clear. There is already proof that pollutants are affecting the genetic mechanisms of some fish and insects. It would be folly to assume that similar changes might not be equally certain and irrevocable in the human species.

Even by conservative estimates, to redress the ravages to our natural habitat will be an extremely long and costly undertaking. On the other hand, with relatively simple and inexpensive efforts we can determine the extent to which the function and adaptability of the human organism is being impaired and how these effects can be minimized.

Over prolonged periods, the equilibrium of the internal environment is patently vulnerable to the action and interaction of the state of drugs daily overextending its metabolic machinery. Yet the precise effects on the different body systems of most of the compounds currently being taken over the long term are still little, if at all, understood.

Up to now, the safety of a drug has been considered relative to its value in assuaging disease, any undesirable side-effects being balanced off against its therapeutic efficacy and the length of time for which it is prescribed.

The safety standards now required for any drug include a supposed proven absence of potential to kill, to poison, to cause cancer, or to maim the unborn. In testing drugs whose use is not intended as medication, however, an additional category of information should be mandatory.

It is essential to establish not only the primary effect of a compound on the cells of the organ where its action is specific, *i.e.*, on the target organ, but similar data is equally important with respect to all the vital organs of the body—liver, brain, kidneys, etc. Furthermore, we must be able to determine if repeated or long-term administration of a drug could so change the body's response to external stimuli, and the remarkable adaptability of its protective mechanisms, as to alter entirely the established patterns of health and disease.

It may seem surprising to the point of incredulity that these aspects of drug safety have not been tackled. The truth is that many of the logical questions have not as yet even been asked.

Senate investigating committees, with the best of intentions, find themselves grappling with lengthy sessions of conflicting expert opinions. The F.D.A. responds alternately in undue haste or with agonizing circumspection. And the pharmaceutical manufacturers are obliged to send more and more "dear doctor" letters of caution to the dispensing physician. But none of this contributes in any way to a solution of the basic problem.

The care of the private citizen's ills is the concern of the medical profession. Protection of community health is the responsibility of the lawmakers. When the nation's health and that of the next generation is in jeopardy through lack of knowledge about the safety of products in free supply and increasing demand, the onus for instituting effective protective measures or at least the possibility of finding them, falls squarely on those who frequent the corridors of power.

The extent to which modern man's internal environment is being polluted is still limited and measurable. Correction and prevention would be a relatively simple undertaking. The longer we delay, the more complex and expensive it will be. In essence, it is a matter of predicting the contingencies and establishing logical priorities. To attack the environmental problems around us with dedication and resolve will be self-defeating if we fail in our calculations to consider first and foremost the human animal.

Dr. Peter Beaconsfield is an American surgeon now at the University of London.

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DISCUSSION QUESTIONS

1. According to Dr. Beaconsfield, how is internal pollution occurring?
2. What is the responsibility of the Food and Drug Administration (FDA) in protecting the community from internal pollution?
3. What are the present guidelines for evaluating the safety of a drug?
4. Why does Dr. Beaconsfield believe that these present guidelines are inadequate for protecting the health of the community?

Content	*Suggested Student Activities*
New York State Health Department works in cooperation with federal and local health agencies.	
New York City Health Services Administration has major responsibility for the maintenance of public health in the city.	
Department of Health is one component of the Health Services Administration. Some of the functions of the Department of Health include:	Participates in inviting a representative of the New York City Department of Health to describe city community health programs.
Keeping vital statistics (records of births, deaths, and marriages)	
Enforcing the Health Code	
Providing immunization and laboratory services	
Maintaining local health clinics	Interviews school physician or nurse, about the role of the school in providing health services to its students.
Providing community educational programs	
Maintaining health services in the school	
Schools make an important contribution in areas of health education and health services.	Discusses how health services can be improved by cooperation between the school and the home.
PRIVATE AGENCIES	
Professional health associations, such as the American Medical Association (AMA), were formed to raise the standards of professional medicine in the United States and to promote public health.	
Voluntary Health Organizations, such as the American Cancer Society, the American National Red Cross, and the American Heart Association, are supported by public donations and are concerned with the promotion of public health.	Reports about purposes, means of support, and organizational structure of voluntary health organizations. Indicates how young people may assist these organizations in their effort to serve the community.
Hospitals and clinics serve important roles in protecting the health of a community.	Participates in surveying hospital and clinic services in the community. Indicates strengths and weaknesses, and suggests ways of improving the community program.
Nursing homes have become an essential community health facility. Nursing homes care for people who need nursing care but who do not need the services of a hospital.	

NATIONS ARE DEPENDENT UPON ONE ANOTHER TO PROMOTE HEALTH AND TO SOLVE HEALTH PROBLEMS

Content

Suggested Student Activities

WORLD HEALTH ORGANIZATION (WHO)

The United Nations established the World Health Organization in 1946 to function as a public health service for the world community.

WHO is helping countries to solve many of their health problems in ways such as the following:

- Building up a nation's potential to deal with and support its own health concern
- Directing and coordinating international health work
- Assisting governments upon request in strengthening health services
- Providing technical assistance and necessary aid in emergencies
- Stimulating and advancing health projects in the eradication of disease
- Promoting cooperation among scientific and professional groups for the advancement of health

Discusses the importance of being concerned about the health problems of the world community.

Participates in a panel discussion about the origin, structure, and functions of the World Health Organization.

Invites persons who have lived in other countries to discuss health problems they found. Discusses opportunities available to young people for alleviating human misery and suffering in other parts of the world.

Discusses relationships between poverty and health status.

WORLD HEALTH PROBLEMS

Some health problems of the world have reached a state of emergency.

Shortage of safe drinking water has become a worldwide problem.

- A WHO study indicated that 90 percent of the population of the developing countries do not have available adequate amounts of safe drinking water.
- In many countries in Africa, South America, and Asia, the majority of diagnosed deaths are caused by intestinal diseases spread by polluted water.

Inadequate waste disposal affects the quality of water in addition to affecting other environmental factors.

Air pollution is causing deep anxiety in developing as well as in highly developed countries.

Participates as a member of a committee to report about health problems in selected countries. (Pertinent information about health problems in other countries may be obtained by writing to WHO and to various embassies or consulate offices.)

Discusses why environmental pollution is as much a world health problem as a national problem.

WHO Seeks Curb On Tobacco Crop

By THOMAS J. HAMILTON

Special to the New York Times

GENEVA, Jan. 30–The World Health Organization hopes to step up its campaign against cigarettes by reducing the world's production of tobacco.

A reliable source disclosed this week that the agency, which is disturbed by the slow progress of the antismoking drive, will ask the Food and Agriculture Organization, another United Nations agency, to see what can be done to persuade farmers to give up raising tobacco and shift to other crops.

This new approach to a solution of the smoking problem was advocated at the current session of the World Health Organization's executive board by Dr. Basil Layton, principal medical officer of the Canadian Department of National Health and Welfare.

Dr. Lucien Bernard, assistant director of the World Health Organization, replied that it was already discussing alternatives to tobacco production with the Food and Agriculture Organization, which has its headquarters in Rome.

According to Dr. Bernard, the Food and Agriculture Organization gave the suggestion a chilly initial response, contending that such a change involved complicated physical and geographical problems. Officials took the position that they could not make any move in that direction without the specific approval of interested governments.

In the end, however, Dr. A. H. Boerma, director general of the Food and Agriculture Organization, promised to authorize a study of alternative crops if the World Health Organization requested it. A formal request will be submitted shortly, health officials said.

United Nations narcotics officials have already sponsored a campaign to persuade Lebanese farmers to raise sunflowers instead of marijuana.

However, tobacco is such an important money crop in many countries that there is considerable doubt about the willingness of farmers to make the change unless they are convinced that they can make as much money raising something else.

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DISCUSSION QUESTIONS

1. Do you think that it is appropriate for WHO to become involved in the antismoking campaign? Why?
2. Why may the WHO plan for reducing the world's production of tobacco run into strong opposition?
3. What other action may the WHO take in aiding an antismoking campaign?

Content	*Suggested Student Activities*
The World Health Organization has been concerned mainly with the measurement of air pollution and its effect on health.	
Radiation is recognized as a major world health hazard and protection against it calls for cooperative preventive action by governments.	
An international environmental radiology monitoring unit is being set up to provide data on levels of radiation to which people are exposed.	
Studies on the long-range effects of radiation on man are being conducted under the supervision of the World Health Organization.	
Control of disease has been a focus of international efforts since the first international sanitary conference in 1851.	Using the resources of the WHO, reports about the progress of its program to eradicate malaria.

Food Enough For Everyone

By LORD BOYD-ORR

BRECKIN, Scotland–Half the population of the world is suffering from lack of food and the population is growing at a rate which will double it in thirty years. Based on these estimates there have been predictions of famines in the immediate future and "a world food crisis of staggering proportions" by 1985. These alarming predictions warrant serious consideration of the amount of food the earth can be made to produce and of how long the explosion of population may continue.

The capacity for food production can be illustrated by the amount Britain produced during and after the Second World War. Before the war two-thirds of the food consumed was imported, but this was cut off by the German submarines. By the end of the war home-produced food, estimated in calories, was doubled. Production was also increased in North America and Australia.

Within a few years after the war production was up to the pre-war level in Europe, and it also increased in Russia and China. In Britain, North America and Australia unmarketable surpluses accumulated and measures were taken to decrease production.

In Britain between 1947 and 1967 farmers, in an attempt to maintain their income, increased grain production by 80 per cent, nearly twice the rate of increase of the world population. In the six countries of the Common Market quantities of food, including 300,000 tons of butter, have accumulated. In Russia, where the management of the large farms was by committees of bureaucrats with little practical knowledge of farming, increase in production was slow, but in the later 1950's the management of farms was made more efficient, and between 1960 and 1968 the total grain production, measured in 1,000 million metric tons, increased from 96,000 to 140,000, an increase of nearly 50 percent. Russia has now become an exporter of wheat; 3,356,000 tons were exported by 1967 and the amount exported continues to rise.

In China the management of agriculture is by elected committees of farm workers who choose the manager. The workers get instruction on improved methods by experts trained in efficient agricultural institutes. In 1959 there was such a bumper grain harvest that much of it was lost due to lack of storage space. Then followed three bad harvests when wheat was imported from Canada and Australia. Since then harvests have been good but China continues to buy wheat.

Both Russia and China are engaged in projects to increase the area of cultivation. I have been in Russia and China several times, taking a special interest in agriculture and the state of nutrition. I never saw a case of obvious malnutrition. These two countries can now be regarded as self sufficient in food and likely exporters.

These examples of rapidly increased production of food have been made possible by advances in agricultural sciences, especially improved strains of grain, chemical fertilizers, irrigation and inducements to land workers. If these modern methods were applied to the full in countries with surpluses, the surpluses would be doubled. If applied in the food-deficit undeveloped countries the output would be doubled and redoubled.

Nearly half of the once fertile land on the earth now semi-arid or desert could be reclaimed as has been demonstrated in experimental areas of the Sahara Desert. Chemists and biologists can synthesize food from industrial waste like wood and petroleum and from green vegetation not used as food. The only practical limit to food production is the effort governments devote to it. Sufficient could be produced to support three or four times the present world population.

It is unlikely that the population will increase to that extent. The explosion of population began in Western Europe. In England the population rose from 10 to 34 million not counting the millions who emigrated. The percentage growth is falling. In England, for example, it fell from 14.5 in 1881 to 5.5 in 1921 and has since fallen to near zero. With modern methods of contraception the explosion could be stopped by efficient governments. In Japan the number of births fell from 2,692,000 in 1949 to 1,607,000 in 1962. Food can be produced in abundance and the explosion of population halted if all governments were effective and willing to apply the necessary measures.

If a permanent World Food Council, including representatives from food-deficit countries, could be set up to deal with the world food problem, agricultural and engineering technology could eliminate hunger from the world within a decade and our civilization need not be threatened by a world food shortage.

Lord Boyd-Orr is one of the world's leading food and population experts.

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DISCUSSION QUESTIONS

1. What are some of the techniques that can be utilized to increase food production in the developing areas of the world?
2. How is population control related to the world food crisis?
3. Evaluate the statement by Lord Boyd-Orr, a leading food and population expert, that the only practical limit to feeding everyone in the world is the effort governments direct to it.

HIGH-SCHOOL CRUSADE

The students of Mount Royal High School in Quebec have set up an organization called SWAY (Students War Against Yaws); SWAY also means YAWS spelt backwards. Their aim is to gather funds for yaws control and so far WHO has received from this source more than $40,000 in eight years.

A contagious, infectious disease of the tropics, yaws is characterized by strawberry-like skin lesions on the palms of the hands and soles of the feet, followed by destruction of muscle and bone tissue. Children are the chief victims. The disease can be cured with a simple injection of long-acting penicillin, and WHO, in the course of mass campaigns in 40-odd countries, has examined 150 million people and treated 45 million yaws victims.

The Town Council of Mount Royal is supporting with pride the activities of its students, who are seeking this year $100,000 from a campaign in all high schools in Canada.

City Hall was turned over to the students, who held there a 24-hour fast in order to draw as many sponsors as possible, who will pay them a certain amount for every hour of the fast.

The Mayor of the town of Mount Royal has issued a proclamation in favour of the SWAY programme, and paid a warm tribute to the students for their successful and sustained efforts to help fight this cruel disease. Prime Minister Pierre Trudeau has also expressed his approval of the students' action.

SLEEPING SICKNESS IN AFRICA

Sleeping sickness remains a danger in Africa, where control of the disease involves considerable difficulties, particularly because of the continental dimensions of the problem, the large numbers of people exposed to the infection, and the lack of a single inexpensive method of mass control effective in all conditions.

Seventy years have passed since the discovery of the infectious agent, the trypanosome, which is transmitted by the tsetse fly. Both wildlife and cattle constitute a huge reservoir of the infection.

WHO has undertaken a project of operation research in human and animal trypanosomiasis, as a result of the reappearance of the disease some years ago in epidemic proportions in western Kenya. FAO and the UN Development Programme are participating in the project. Aerial spraying with dieldrin in a trial area gave particularly encouraging results. Tsetse fly reduction was of the order of 99.9 percent for up to 12 weeks, while even after 3 months 40-50 percent effectiveness was recorded.

Research is also continuing, and an interministerial coordination committee has made valuable contributions to the success of the project.

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CLASS ACTIVITY

After contacting the World Health Organization, plan a class or schoolwide project to help developing nations in their fight against disease.

Cholera Has High Fatality Rate

Both cholera and typhoid affect the bowel and can be spread through water contaminated with the bacteria that cause these diseases. Accordingly, public health officials stress good sanitation to prevent these illnesses, which are rare in developed countries but can spread in underdeveloped areas.

Cholera takes from a few hours to five days to affect man, with the usual incubation period of 2 or 3 days. If untreated, cholera can kill 50 per cent of its victims within a few hours from the diarrhea and fluid loss that results from the effects of a toxin produced by the bacteria.

Typhoid takes longer to make man sick. The usual incubation period is about 2 weeks. Without treatment, the fatality rate from typhoid is about 10 per cent, but antibiotics can reduce this to about 3 per cent.

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DISCUSSION QUESTIONS

1. Why is good sanitation important in the prevention of cholera and typhoid fever?
2. Why are these diseases far more prevalent in developing areas of the world?

Content	*Suggested Student Activities*
Communicable diseases require continuous vigilance in view of the high mobility of world societies. Also, many communicable diseases are spread by animals and insects which may be transported from one country to another.	Selects a country and reports on that country's (1) health problems concerning food, water, clothing, and disease; and (2) the immunization required in these countries.
Some of the major communicable diseases of the world are: malaria, tuberculosis, bubonic plague, venereal disease, cholera, yaws, typhoid fever, smallpox, influenza, and leprosy.	
Noncommunicable diseases are more prevalent in the developed countries than in the developing ones.	Compares health problems and leading causes of death in the United States with those in other countries.
Major noncommunicable diseases of the world are: cancer, cardiovascular diseases, diabetes, renal diseases, arthritis, nutritional deficiencies, and mental disorders.	
Malnutrition and undernourishment are among the most important world health problems. The universal concern for food supplies around the world is one of the major expressions of the humanitarian spirit of this age.	Differentiates between malnutrition and undernourishment. Reads and reports about the world food situation. Participates as a member of a committee to report on the activities of the Food and Agriculture Organization (FAO) of the United Nations in the area of world nutrition.
Overpopulation created by high birth rates and declining death rates in various regions of the world have generated social, economic, and population problems of worldwide concern.	
The World Health Organization is studying and coordinating research in the medical aspects and dynamics of population increases as they affect health.	Participates in contacting the United Nations Population Commission for information about the population situation in the world today and in the foreseeable future.

MAN'S QUEST FOR KNOWLEDGE IS OPENING UP NEW HEALTH CAREER OPPORTUNITIES

Content	*Suggested Student Activities*
The current shortage of health personnel poses many problems in the United States and throughout the world.	Prepares a report about careers in health. (School health counselor is a resource.)
Technological improvement in the area of health will continue to bring about the development of new jobs.	Does research about current health problems and anticipated health achievements. Discusses possible future health careers.

Content	*Suggested Student Activities*
Greater effort will be required to enlist, educate, and train additional manpower in the field of health.	
A career in one of the health services offers opportunities suitable to almost every type of individual.	Selects a health career and finds out the kind of work involved and the requirements, preparation, and experience needed for the job.
Both men and women can find opportunities in health careers.	
The amount and kind of education and skills one needs depends on the particular specialty chosen.	
Desk or laboratory specialties Food and drug analyst Graphic arts specialist Information and communications Laboratory, medical, blood bank, or X-ray technician Medical secretary	
Working with people Aides to the mentally or physically handicapped Dental hygienist Hearing, occupational, physical, recreational, or speech therapist Nurse's aide Practical nurse Psychiatric or medical social worker Receptionist Vocational rehabilitation aides	
Research technicians Medical statistician Morbidity and mortality recorder Mortality analyst Population data analyst Research specialist	Discusses why the collection of vital statistics data is essential in the area of epidemiology. (Epidemiology is the science and method of study concerned with the factors and conditions which determine the occurrence and distribution of health, disease defect, disability, and death among groups of people.)
Professional health careers Dentist Dietician Environmental health service Hospital administrator Industrial hygienist Medical librarian Optometrist Pathologist Pharmacist Physician	

Psychiatrist
Public health educator
Public health service officer
Public health nurse
Sanitarian
School health educator
Surgeon
Veterinarian

Health Career Opportunities

Job Hunting: Young people seeking summer or year-round jobs in the health field, either as volunteers or paid workers, must first decide on the type of work they want to do and feel qualified for. They should get any necessary work permits and obtain letters of recommendation as to their character, industry, dependability, and special skills.

The first person to talk to is the school guidance counselor, who may be able to suggest a suitable job opening. Friends shouldn't be overlooked as a possible source of job information. Local health associations may have information on job possibilities, as should nearby hospitals, universities, and civic organizations. It is often worthwhile to check the classified section of the telephone directory under "Health" or "Medical Groups" to locate other sources that may be worth calling. The family doctor or the neighborhood pharmacist may be able to offer some helpful suggestions. The following publications provide valuable information and job sources:

Horizons Unlimited (General Handbook on Health Careers), American Medical Association, 535 North Dearborn Street, Chicago, Illinois, 60610.

20 Questions About Volunteer Service for Teen-agers, American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois, 60611.

Health Careers Program, National Health Council, 1740 Broadway, New York, New York, 10019. (Note: Also address questions about specific types of work to the Council.)

Directory of Camps for the Handicapped, American Camping Association, Bradford Woods, Martinsville, Indiana.

Directory of Day Camps Serving the Mentally Retarded and *Directory of Residential Camps Serving the Mentally Retarded,* National Association for Retarded Children, 420 Lexington Avenue, New York, New York, 10017.

Directory for Exceptional Children (all handicaps), Porter Sargent, Inc., 11 Beacon Street, Boston, Massachusetts, 02108. (Note: This book costs $12, but is generally available for reference at major libraries.)

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CLASS ACTIVITY

Using information contained in this article, have committees inquire about summer and/or career opportunities in the health field.

SAFETY and FIRST AID: Grade 8

Generalizations

POTENTIAL FOR ACCIDENTS EXISTS EVERYWHERE IN MAN'S ENVIRONMENT. 270

INDIVIDUALS SHOULD BE PREPARED TO ACT EFFECTIVELY IN CASE OF ACCIDENTS. 274

POTENTIAL FOR ACCIDENTS EXISTS EVERYWHERE IN MAN'S ENVIRONMENT

Content	*Suggested Student Activities*
An accident is an unexpected or unintended occurrence which usually produces injury, death, or property damage.	Writes a definition for the term, accident.
Accidental injury is the leading cause of death for ages 1-37.	Participates as a member of a committee to write to the National Safety Council (Chicago, Ill.) or New York State Department of Health for information on accident facts.
CAUSES OF ACCIDENTS	
Behavior contributing to accidents may be the result of imitation, failure to follow directions, carelessness, or inability to recognize hazards.	Views films, such as *Accidentally Yours.*
Mental health factors which may affect an individual's safety include emotional problems and personality.	Discusses behavioral factors which might result in accidents. Using these factors, analyzes causes of accidents personally involved in or recently reported by friends.
Individuals who have frequent accidents are usually regarded as being accident-prone.	Discusses how unsafe acts performed by individuals may be related to their emotional status.
Environmental factors which affect accidents include:	Gives examples of persistent patterns of behavior that might cause an automobile driver to be susceptible to accidents.
Poor construction or engineering of vehicles, roads, buildings, etc.	Participates in inviting a representative of an insurance company to discuss factors which determine insurance premiums and to indicate how insurance companies deal with individuals who are considered accident-prone.
Unprotected areas	
Exposure to moving parts of machinery without proper safeguards	
ACCIDENT PREVENTION	
Though the possibility of an accident always exists, an individual often has control over what actually happens.	Discusses the following statement: Like disease, accidents have causes, and these causes may be eliminated or controlled.
Individuals cannot always live safely by themselves since the attitudes and actions of others affect them.	Reacts to the old idea that accidents are a matter of chance or that safety is just good luck.
Practices that might eliminate or control accidents include:	
Being proficient in one's daily activities	Discusses how skillful gymnasts can perform difficult stunts with minimum risk.
Developing an understanding of oneself and realizing that capacities and reactions vary from time to time.	
Maintaining good health and general fitness which provide for greater alertness, physical strength, and dexterity.	Participates in interviewing a local high school football coach on the matter of fitness and conditioning as means of controlling team injuries.

ACCIDENTS

Content	*Suggested Student Activities*
Falls in the home may be eliminated or prevented by orderliness and good housekeeping procedures.	Reads and reports about, "Are you Heading for a Fall?" by M. Michaelson. Lists practices that can be followed in order to minimize chances of falls in the home.
Burns and/or scalds are usually caused by carelessness.	Collects newspaper clippings about children who have been burned. Makes suggestions about how the accident could have been prevented.
Poisoning may be caused by gas or some common household substance.	
Gas is often not detected and may cause death because many gases are colorless, odorless, and tasteless.	Discusses the common causes of carbon monoxide poisoning. Indicates why carbon monoxide is dangerous and what effect it has on the body which makes it so dangerous.
Many common household substances, both solids and liquids, may be harmful if directions for their use are not followed.	Lists common household poisons. Discusses the importance of labels on containers for household poisons.
Electrical mishaps can often be avoided if family members have basic knowledge about home electric dangers. Procedures for preventing electrical mishaps include:	
Use electrical equipment approved by Underwriter's Laboratories.	
Place cords where they will not be walked upon.	
Replace frayed cords.	
Keep hands dry when operating electrical appliances.	
Pedestrian accidents are most frequent among the very young and the very old.	Makes a survey and reports about pedestrian practices in the community. Indicates the more common violations of pedestrian rules and lists suggestions for improving pedestrian safety in the community.
In order to achieve maximum level of highway and pedestrian safety, pedestrians and motorists must cooperate.	

FIRES IN THE HOME

Content	*Suggested Student Activities*
Fires can be significantly reduced if people are informed and are willing to follow safety precautions.	Participates in inviting a speaker from the Fire Department to discuss fire prevention.
Causes of fires include:	Views films, such as *Help Prevent Fires*.
Children playing with matches	
Misuse of electricity	
Misuse of flammable liquids	

Content	*Suggested Student Activities*
Spontaneous ignition, as in the case of rubbish accumulations	Participates in planning a class or schoolwide clean-up program during Fire Prevention Week.
Lightning	
Procedures to follow in case of fire include:	Using *First Aid Textbook* (American Red Cross textbook) as a resource, discusses safe procedures for escape from fire.
Remain near the floor because both heated air and carbon monoxide tend to rise.	
Keep doors closed because fire travels faster when doors and windows are open.	Discusses the importance of every family having a plan for escape in case of fire at home. Practices such drills at home.
Cover body with a thick textile, preferably wet. This protects one from heat for a time, but not against carbon monoxide.	Discusses the importance of the school fire drill. Makes suggestions for improving fire drills.
Notify local fire department immediately because fires can be controlled by quick action.	
Crouch low and open door cautiously when attempting escape. This is necessary because the next room may contain superheated air under pressure, which may cause a fatal blast.	
Close doors and transoms while awaiting rescue. Open window slightly and breathe incoming air.	
Attempts at rescue should not be foolhardy. It is difficult to locate people trapped in a smoke-filled building.	

SAFETY IN PHYSICAL AND RECREATIONAL ACTIVITIES

There are specific hazards associated with particular athletic and recreational activities.	
Swimming is a competitive, recreational, and lifesaving activity. Certain basic procedures should be learned for safe swimming. These include:	Views films, such as *Be Water Wise: Swimming.* Participates in preparing posters to illustrate important water safety rules.
Know your own swimming ability and do not overestimate it.	Discusses why it is good practice to swim with a buddy.
Swim with a buddy.	Discusses why it is an unwise practice to call for help in jest.
Dive only in safe areas.	
Swim at a safe bathing place, preferably one supervised by lifeguards.	
Be courteous and considerate of the safety of others.	
Boating is a popular and enjoyable recreational activity. Overloading, horseplay, and improper movement of passengers are very dangerous.	Views films, such as *Boating Safety "B" Courtesy Afloat.*

Content	*Suggested Student Activities*
Water skiing is a relatively safe sport, but there are potential hazards associated with it. Basic safety rules for water skiiing include:	
Wear a flotation device.	
Avoid excess speed.	
Stay away from bathers and fishing boats.	
Learn and use proper hand signals.	
Watch for hazards; do not depend solely on the operator of the boat.	
Ice skating, though pleasurable, does present hazards. Safety rules for ice skating include:	
Avoid areas with cracked ice.	
Avoid speed skating in crowds.	
Wear adequate protection against sun and wind.	
Be careful in the use of hockey sticks and pucks.	
Camping trips require careful planning. It is desirable to include at least one experienced camper who is familiar with the camping area, and with the hazards it may pose. Some safety factors for camping trips include:	Reports on safety precautions which he has used on camping trips.
Have water supply tested and treated for purity.	Discusses the misconception that water flowing clear and cold from a spring is sure to be safe to drink.
Avoid placement of campsite on the bank of a stream where there is danger of a flash flood.	
Light a fire only in a safe area.	
Avoid using a campsite next to the only tree in an area because of the danger of lightning.	

SAFETY IN CIVIL EMERGENCIES

The purpose of national, state, and local civil defense programs is to protect the people of a community in the event of large-scale disasters.	Participates in inviting a civil defense official to discuss the purpose and organization of his program.
The important element in civil defense planning for the nuclear age is the provision of shelters to protect people from radioactive fallout.	
Protection against fallout radiation may be achieved by getting inside a fallout shelter before fallout particles begin drifting down and by staying there until the radiation level is safe.	

INDIVIDUALS SHOULD BE PREPARED TO ACT EFFECTIVELY IN CASE OF ACCIDENTS

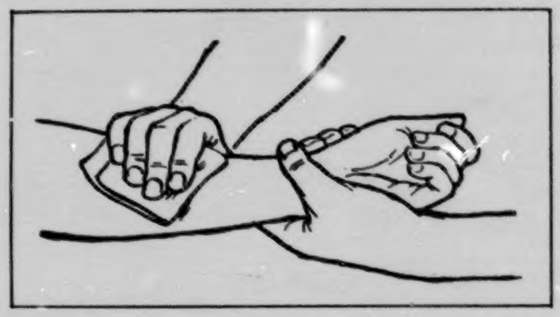
Content	*Suggested Student Activities*
First aid is the immediate and temporary care given to an injured or sick person until the services of a physician can be obtained.	Discusses the difference between the administration of first aid and treatment.
GENERAL DIRECTIONS FOR FIRST AID	
The first aider should function in a logical and systematized way, not in a state of panic and disorganization. Steps that should be taken in providing first aid care include:	Plays a role depicting an accident situation in which general first aid procedures are used. (Example: A man has just been hit by a car and a large crowd is beginning to form around him.)
Determine the victim's injuries.	
Decide priority of injuries that should be cared for.	Discusses why first aiders should give immediate attention to cases involving severe bleeding, stoppage of breathing, and poisoning.
Get the victim's name and address.	Indicates why it is important to find out if the victim is carrying an identification card which might indicate that he is a diabetic, an epileptic, a hemophiliac, etc.
Secure necessary help.	Reacts to the following advice given by a first aid authority: Do only what you are sure is correct. If you are not reasonably sure, take no action at all.
Protect victim from further harm.	
Provide psychological reassurance.	Indicates why we may say that first aid frequently involves more than providing for the physical needs of a victim.
Deal with external factors, such as weather, traffic, and crowds.	
First aid kits and materials should be available in places where accidents are likely to occur. First aiders must frequently improvise with available materials.	Observes demonstration of contents of first aid kit. Discusses how the contents of the kits are used in first aid care.
WOUNDS	
A wound is a break in the skin or in the mucous membrane lining of one of the body cavities.	
There are several types of wounds, each with	

Content	*Suggested Student Activities*
specific characteristics. The first aider should be familiar with the following types of wounds:	
An abrasion is an irregular, superficial, open wound of the skin in which the outer layer is scraped off. There is relatively little bleeding.	Discusses the kinds of accidents that produce abrasions.
An incised wound is a clean, sharp cut in the skin which may involve capillaries, veins, or arteries. Such wounds may bleed profusely.	Discusses kinds of accidents that produce incised wounds.
A puncture wound is a deep penetration of the skin caused by such objects as bullets, nails, and ice picks.	Discusses why tetanus (lockjaw) is most closely associated with puncture wounds.
A laceration is a wound in which there is a jagged, ragged, tearing of the tissues. Bleeding and/or infection are dangers associated with laceration.	Discusses kinds of accidents that produce lacerations.
First aid care for minor wounds includes the following procedures: Wash wound thoroughly with soap and water. Dry area. Apply a sterile dressing and bandage. Avoid tincture of iodine or other antiseptic solution containing alcohol.	Discusses how strong antiseptic solutions, unnecessary for minor wounds, may cause uncomfortable burning.
Infection is one of the dangers of wounds because broken skin permits entry of microorganisms. Tetanus must be considered a danger in all wounds. Symptoms of infection in wounds include redness, swelling, pain, and warmth.	Discusses the body defenses against disease. Indicates why tetanus is frequently referred to as lockjaw. Reads and reports about why an infection might cause lymph nodes to become swollen.
First aid care for infected wounds involves thorough cleansing of the area around the wound in order to prevent infection. Suggestions for the care of wounds follow: Get medical attention. Keep victim quiet and at rest. Elevate affected part. Apply warm wet dressing, using salt solution, if medical attention is delayed.	Indicates why it is important for a first aider to wash his hands thoroughly before caring for a wound. Discusses how physical activity may cause the spread of infection.
Severe bleeding is another serious danger of wounds. Control of severe bleeding requires immediate attention. If a large blood vessel is	Discusses why severe bleeding requires immediate attention.

cut, blood loss may, within a short time, result in death.

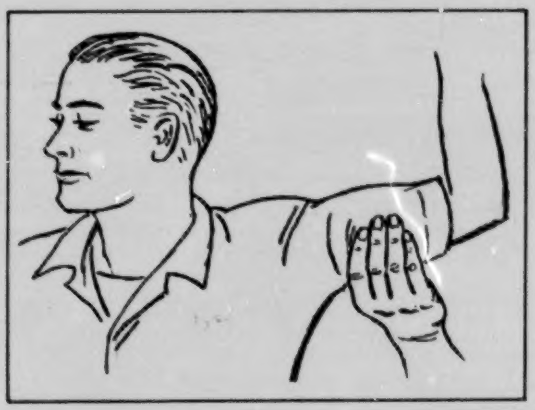
First aid care for severe bleeding includes direct pressure, pressure at pressure points, and the use of tourniquets.

Direct pressure. Application of pressure directly on the wound with a sterile compress is the safest and most effective method for controlling bleeding.

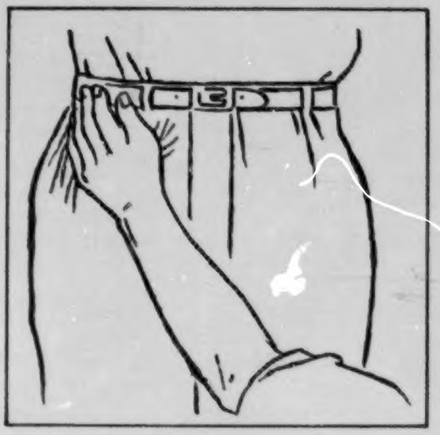


Pressure points. If direct pressure alone fails, continue it, but also apply pressure at the appropriate pressure point.

Pressure on the inner half of the arm midway between the elbow and the armpit compresses the *brachial artery* against the bone and diminishes bleeding in upper extremity below the point of pressure.



Pressure against the *femoral artery* and bone just below the groin on the front, inner half of the thigh diminishes bleeding in the extremity below the point of pressure.



Content	*Suggested Student Activities*
	Using a chart of the human body, locates the brachial and femoral arteries.
Tourniquets should be used ONLY as a last resort for severe, life-threatening hemorrhage that cannot be controlled by other means.	Discusses why gangrene infection is a special danger when using a tourniquet on a victim.
An improperly used tourniquet may cause serious injury.	Using a source such as *First Aid Textbook* (American Red Cross), reads how a tourniquet is properly applied.
A tourniquet should be used only when the decision has been made by a trained person that it may be necessary to sacrifice a limb to save a life.	Observes teacher demonstration of proper application of tourniquet.
SPECIAL WOUNDS	
Internal bleeding may be caused by blows or other injuries to internal organs.	Discusses the kinds of accidents that might cause internal bleeding.
Symptoms of internal bleeding are similar to those of shock (see p. 427). Blood coming from the mouth and nose may also be an indication of internal bleeding.	
First aid care for internal bleeding follows: Keep victim in a lying position. Conserve body heat. Get medical attention.	
Animal bites always involve danger of infection and rabies.	Discusses why the potential danger of an animal bite is greater than that of an ordinary wound.
Any warm-blooded animal that is infected with rabies may transmit the disease to humans through a break in the skin.	
Never kill an animal that has bitten a person. Authorities should catch the animal and confine it for observation.	Discusses why New York State and New York City health laws require that cases of animal bites be reported to the Department of Health.
Animals that frequently bite humans include cats, dogs, rats, rabbits, bats, squirrels, and raccoons.	
First aid care for animal bites includes: Wash wound and surrounding area with soap and water. Cover wound with a sterile compress and bandage. Obtain medical attention.	

Content	*Suggested Student Activities*
Nosebleeds are usually not serious unless they are profuse or prolonged.	
First aid care for nosebleeds includes: Keep victim quiet in a sitting position with head tilted back or a lying position with head and shoulders raised.	Discusses reasons for the ineffectiveness of old-fashioned nosebleed remedies, such as applying a cold key or ice to the back of the neck.
Pinch nostrils together or press the bleeding nostril against the nose bone for at least five minutes.	
Use cold compresses against the bleeding nostril.	Discusses how cold compresses help to control bleeding.
Pack the bleeding nostril lightly if the bleeding does not stop. Keep victim from running around or blowing nose after bleeding stops. Seek medical advice if nosebleeds occur frequently.	
Bruises or contusions occur when tiny blood vessels are broken by a hard blow or fall. An example of a bruise is a black eye.	Prepares report about some old-fashioned home remedies for taking care of a black eye.
First aid care for bruises involves applying cold compresses to the area for several hours.	
TRAUMATIC SHOCK	
Traumatic shock is a condition in which there is an acute reduction in the volume of circulating blood.	
Shock should always be considered as a possible consequence of any serious injury, such as burns, wounds, or fractures.	Discusses why it is important to begin caring for shock in any serious injury, even before symptoms appear.
Symptoms of shock may be immediately apparent. Major symptoms include: Skin cold, clammy, moist, and pale Eyes vacant and lackluster; dilated pupils Pulse weak or absent Nausea	
First aid care for shock involves both prevention and care. The measures include:	Views filmstrip, such as *Bleeding and Shock.* Indicates why it is important to check for injuries when a victim is in shock.
Keep victim prone to favor circulation to head and chest unless such a position makes breathing difficult.	

Content	Suggested Student Activities
Preserve body heat; do not add heat.	
Give fluids only if medical care will be delayed.	
Check for injuries that might contribute to shock.	
Move victim as little as possible.	

RESPIRATORY EMERGENCIES AND RESUSCITATION

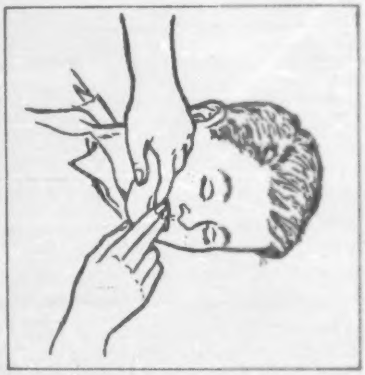
Respiratory emergencies should be dealt with immediately in order to save the victim's life.	
Many types of emergencies result in an insufficient supply of oxygen for breathing.	Discusses emergencies which might result in stoppage of breathing.
Breathing may stop as a result of gas or drug poisoning, electric shock, choking, drowning, suffocation, and injuries to the head, neck, or chest.	
The major symptom associated with an insufficient supply of oxygen is blueness of the skin.	
First aid care for respiratory emergencies have two major objectives, keeping air passages open and getting air into the lungs. Since most persons may live for only four to six minutes after breathing stops, artificial respiration must be started as soon as possible after natural breathing has been interrupted.	Indicates why immediate action is essential in respiratory emergencies.
Rescue breathing, mouth-to-mouth or mouth-to-nose, is one of the simplest and most effective ways to give artificial respiration. This technique is effective for both children and adults and can be used even when there are injuries to the chest and arms.	Views films, such as *Breath of Life*. Demonstrates rescue breathing technique on a mannequin. Using *First Aid Textbook* (American National Red Cross) as a resource, discusses variation of rescue breathing for infants and small children.
Manual methods of artificial respiration require considerable strength and endurance when applied for long periods.	Practices back-pressure arm-lift method of artificial respiration. Using *First Aid Textbook* (American National Red Cross) as a resource, discusses other manual methods of artificial respiration.

POISONING

A poison is any substance which, when taken into the body, will produce an injurious or deadly effect.	Views films, such as *Poisons in the House*.

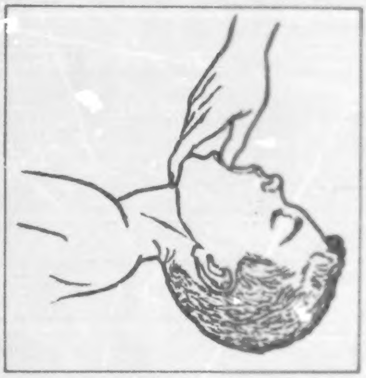
Rescue Breathing

Mouth-to-Mouth

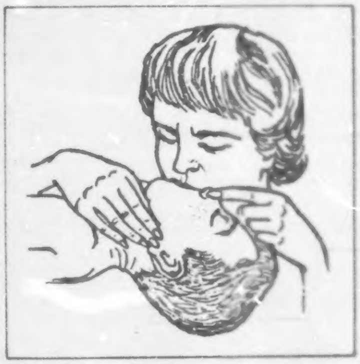


Place victim on back.

Open victim's mouth and clear out foreign matter.



Tilt victim's head back so that chin is pointed straight upward. This is essential for keeping the air passage open.



Pinch the victim's nostrils.

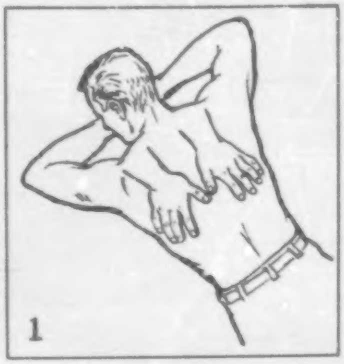
Seal your mouth, wide open, over victim's mouth and blow air in until victim's chest rises.

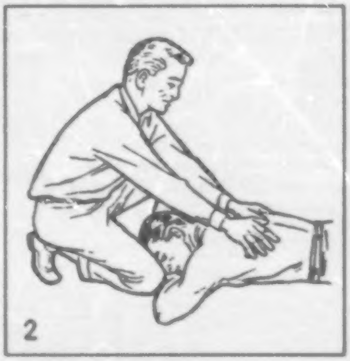
Remove your mouth and listen for returning air.

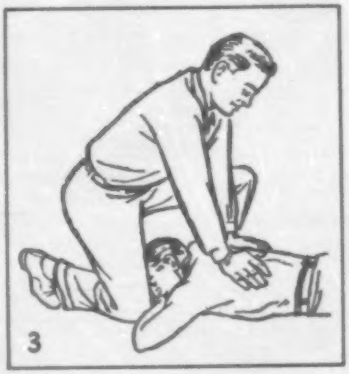
REPEAT THIS PROCEDURE AT THE RATE OF TWELVE BREATHS PER MINUTE.

NOTE: In case of an infant or child, blow less vigorously. Use shallower breaths, about twenty times a minute.

Artificial Respiration
Back-Pressure Arm-Lift Method

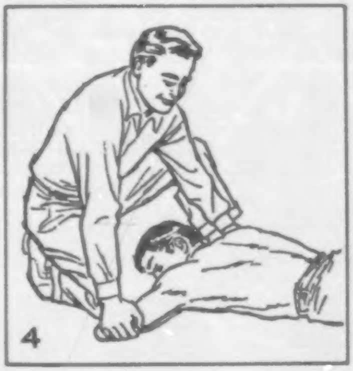






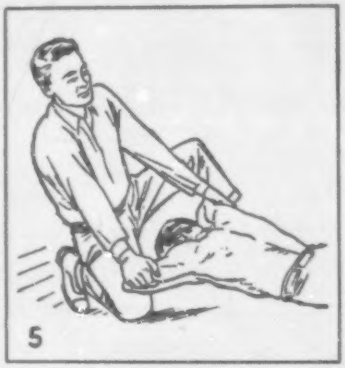
1. Place victim in face-down, prone position. Turn face to one side, placing cheek upon his hands. Always be sure tongue does not block air passage.

2. Kneel on either knee at head of victim, facing him. Place opposite foot near the elbow. Place hands upon victim's back so palms lie just below an imaginary line running between his armpits. With the tips of the thumbs just touching, spread fingers downward and outward.



3. Rock forward until arms are approximately vertical, exerting slow, steady, and even pressure downward on the hands. This forces air out of the lungs. Elbows should be kept straight and the pressure exerted almost directly downward on the back.

4. Release pressure smoothly and pull hands away slowly. Commence to rock slowly backward, placing hands upon the victim's arms just above his elbows.



5. Victim's arms are drawn upward and toward first aider. Apply just enough lift to feel resistance and tension at victim's shoulders. Then lower the victim's arms to ground.

THE CYCLE FOR THIS METHOD SHOULD BE REPEATED TWELVE TIMES PER MINUTE AT A STEADY RATE.

Content	*Suggested Student Activities*
Poisoning may result from taking an overdose of medicines or drugs; being bitten by snake, insect, and marine life; inhaling poisonous gases; or eating toxic foods.	Lists products commonly found around the home that might cause poisoning by accident. Discusses responsibility of older children in preventing accidental poisoning of younger children.
The effects of poison upon the body depend upon the type, quantity consumed, and the age and physical condition of the victim.	Participates in preparing posters to illustrate measures for preventing accidental poisoning.
Measures that might prevent accidental poisoning include:	
Keep medicines and household substances out of the reach of young children.	
Read labels before taking medicine.	
Dispose of incompletely used prescription drugs.	
Do not permit children to chew on painted surfaces or broken plaster.	
Poisons are divided into two categories, corrosive poisons and noncorrosive poisons. It is important that the first aider quickly determine what the victim has swallowed in order to provide proper care.	
If victim of poisoning is unconscious, do not induce vomiting. In such cases, call for ambulance, contact local Poison Control Center, and keep victim lying face down with head lower than hips.	Discusses procedure for getting information from a Poison Control Center.
Noncorrosive poisons include such common household items as alcohol, aspirin, bufferin, hormones, sleeping pills, soap, and vitamins.	Examines medicine chest in the home and identifies items that might cause accidental poisoning. Reports on household items stored elsewhere in the home which might also cause poisoning.
First aid care for noncorrosive poison ingestion includes:	
Eliminate the poison by inducing vomiting.	Discusses methods of inducing vomiting.
Dilute the poison with several glasses of water or milk.	
Call a physician or the local Poison Control Center.	
Corrosive poisons include such household items as acids, ammonia, bleach, cleaning fluid, furniture polish, lighter fuel, paint thinner, and toilet bowl cleanser.	
First aid care for corrosive poison ingestion follows:	

Content	*Suggested Student Activities*
DO NOT induce vomiting.	Indicates how vomiting after the ingestion of corrosive poisons might cause additional injury to the digestive tract.
Dilute poison with water.	
Give milk or egg white to protect the stomach lining.	
Call a physician or the local Poison Control Center.	
Depressant drugs* include barbiturates, opiates, tranquilizers, and alcohol. Excessive dosage of depressant drugs may result in a loss of consciousness, diminished respiration, and insufficient oxygen in the blood and tissues.	
Death from heroin use may be the result of such variables as quantity, strength, adulterant used, allergic reaction, and experience of the user.	Discusses kinds of information that would lead a first aider to suspect that the victim is suffering from a heroin overdose.
First aid care for depressant drug overdose follows:	
Seek medical advice from a physician or the Poison Control Center.	
Arrange for transportation to a medical facility.	
Administer artificial respiration if breathing stops.	
Maintain body temperature.	
Do not give fluids if victim is unconscious.	
Hallucinogenic drugs, such as LSD, cause hallucinations accompanied, sometimes, by marked changes in thought processes and mood. Acute panic or psychotic reactions may also occur.	Reads and reports about studies of physical and psychological effects of hallucinogenic drugs, such as LSD.
Recovery time from the effects of hallucinogens varies according to the kind of drug. Recovery from the effects of LSD ordinarily takes from three to eight hours.	
First aid care for reaction to hallucinogens follows:	
Keep victim under observation to prevent him from harming himself.	
Reassure victim and "talk him down" from his disturbing experience.	

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*See Special Circular No. 10, 1971-1972, "Information and Resources Relative to Drug Abuse Education."

Content	*Suggested Student Activities*
Obtain medical help.	
INJURIES TO BONES, MUSCLES, AND JOINTS	
A fracture is a break in a bone. *Symptoms of fractures* include: Pain and tenderness at site of break Loss of use of extremity containing break Deformity and swelling of broken part Grating sensation in the broken area Discoloration of the skin Some types of *simple fractures* may have no obvious symptoms.	Discusses several types of fractures such as simple, compound, or comminuted. Indicates how first aid care would differ in each case. Using X-ray pictures obtained from a physician, illustrates different types of fractures.
First aid care for fracture includes:	
Immobilize the area, which may be achieved with a splint or with such articles as magazines, pillows, or blankets.	Using a source such as *First Aid Textbook* (American National Red Cross), demonstrates technique for splinting.
Proper splinting of a fracture relieves pain and often lessens shock.	Indicates why it is a good first aid practice to "splint them where they lie."
Give consideration to controlling bleeding and preventing infection if a wound is associated with the fracture.	Discusses why prior attention should be given to the control of bleeding in a compound fracture.
A spine fracture may result from traffic accidents, blows, and falls.	
First aid care for spine fractures follows:	
Do not move the victim unless danger threatens. If it is necessary to move victim, handle him with great care to avoid possibility of further injury.	Indicates why it is dangerous to bend or twist a victim's back if a spine fracture is suspected.
Summon a physician or an ambulance.	
A sprain is an injury to soft tissues surrounding a joint without the displacement of bones.	Using a chart of skeletal system, illustrates how ligaments provide support to joints.
A sprain is caused by sudden twist or wrench of a joint. The ankles, fingers, wrists, and knees are most often affected.	
Symptoms of a sprain include: Pain at the site of sprain Loss of function of affected part Discoloration Swelling	

Content	*Suggested Student Activities*
The possibility of a fracture should always be suspected in sprains because this kind of injury cannot be distinguished from a fracture except by X ray. **First aid care for a sprain** follows: Apply cold applications for the first twenty-four hours. Elevate, immobilize, and rest the injured part.	Discusses why it is good first aid practice to treat a sprain as a fracture. Plays a role depicting a situation in which a friend injures his ankle in a basketball game and there is severe swelling of the ankle.
A strain is an overstretching or tearing of a muscle or tendon resulting from overexertion of body parts. *Symptoms of strain* include: Pain on movement Slight swelling of affected area Possible discoloration Possible stiffness **First aid care for strain** follows: Keep injured part at rest. Apply heat.	Discusses prevention of strains through proper lifting or carrying of heavy objects.
A dislocation is an injury where there is damage done to the ligaments surrounding a joint with a temporary removal of a bone from its normal position. *Symptoms of dislocation* include: Pain Deformity at joint **First aid care for dislocation** follows: Immobilize affected part by splint or sling. Treat for shock. Get medical attention.	Discusses how a dislocation differs from a fracture. Indicates what a first aider would suspect if he noticed a deformity, but not at a joint.

BURNS

Content	*Suggested Student Activities*
Burns are tissue injuries that may be mild or severe. The seriousness of a burn depends upon its extent (amount of body surface involved) and degree (depth of destruction of tissues).	Demonstrates rescue procedures for an individual whose clothing is on fire. Views films, such as *See a Pin*.

Burns may result from thermal heat (heated material, flames), overexposure to the sun, chemicals (strong acids, alkalies, and other corrosives), or electric current.

Burns are classified as follows:

- First degree (Skin surface is reddened.)
- Second degree (Skin is blistered.)
- Third degree (Skin is charred and there is deep destruction of tissue.)

The objectives of first aid care for burns are to relieve pain, prevent shock, and prevent infection.

First aid care for minor burns (first degree) follows:

- Apply cold tap water to clean burnt area and to alleviate pain.
- Apply a generous amount of petroleum jelly.
- Cover with sterile gauze.

First aid care for severe burns (second and third degree) follows:

- Cover burnt area with several layers of dry sterile dressing to exclude air and relieve pain.
- Treat for shock.
- Do not use cold water if skin is burned away.
- Do not use absorbent cotton as a dressing.
- Get medical attention immediately.

First aid care for chemical burns follows:

- Wash away the chemical with water.
- Apply a sterile dressing.
- Seek medical attention.

First aid care for chemical burns of the eye follows:

- Flush eyes immediately with large quantities of water.
- Use a solution of sodium bicarbonate (one teaspoon of baking soda to a glass of water) to neutralize acid burns.
- Apply a sterile dressing.
- Seek medical attention.

Discusses why treatment for shock is an important consideration in cases of severe burns.

Content	*Suggested Student Activities*
Sunburn is caused by overexposure to the sun. Very serious burns may result.	Reads and reports about why dark skin is less sensitive to sunlight than light skin.
Sunburn may be avoided by observing the following precautions: Limit the time of initial exposure. Use an appropriate lotion, such as zinc oxide ointment, as protection against the sun's ultraviolet rays.	Indicates why a person may become sunburned even on a cloudy day.
First aid care for sunburn is similar to that for first or second degree burns.	

ILL EFFECTS OF EXCESSIVE HEAT

Content	*Suggested Student Activities*
Heat exhaustion often results from overexposure to excessive heat.	Discusses preventive measures for heat exhaustion.
Symptoms of heat exhaustion include: Dizziness Faintness Nausea Weakness Pale, cool, and moist skin Profuse sweating Shallow breathing Normal temperature	Discusses effect that profuse sweating has on the salt balance in the body.
First aid care for heat exhaustion follows: Keep victim lying down and quiet in a cool area. Loosen victim's clothing. Provide salt solution by spoonful, if victim is conscious. Get medical attention	
Sunstroke (heatstroke) is a condition where there is a disturbance of the heat-regulating mechanism of the body.	Discusses why elderly people are susceptible to sunstroke.
Symptoms of sunstroke include: Flushed and hot skin Headache Rapid pulse Dizziness Nausea Very high temperature	Compares symptoms of heat exhaustion with those of heatstroke.

Vomiting
Unconsciousness
Convulsions

First aid care for sunstroke follows:

Bring victim indoors or into a shady and cool place.

Sponge victim's body with alcohol or lukewarm water.

Provide salt solution in small doses, if victim is conscious.

Get medical attention immediately.

Heat cramps usually involve abdominal muscles or limbs and are often associated with heat exhaustion.

Discusses why persons working in very high temperature should take doses of salt pills regularly.

Symptoms of heat cramps include:

Weakness
Dizziness
Fatigue
Severe pain in region of abdomen or the lower extremities
Excessive sweating

First aid care for heat cramps follows:

Apply firm pressure to cramped muscle.

Apply warm, wet compresses.

Administer salt solution by spoonfuls.

ILL EFFECTS OF EXCESSIVE COLD

Frostbite is injury to tissues resulting from freezing of body parts.

Discusses steps that could be taken to prevent ill effects of excessive cold.

Frostbite is caused by exposure to cold, especially moist cold. The nose, ears, cheeks, fingers, and toes are most frequently affected.

Frostbite can occur even if one is not aware of it.

Symptoms of frostbite include:

Frostbitten parts becoming cold and numb and taking on a lighter or graying yellow color

Painful tingling sensations sometimes felt as the part begins to freeze

Content	*Suggested Student Activities*
First aid care for frostbite follows:	
Use extreme care in thawing out frozen tissues to avoid additional injury.	
Remove victim from freezing temperature as soon as possible.	
Avoid massage of thawing tissue.	Indicates why it is a poor first aid practice to massage the affected part.
Avoid placing heat directly on thawing tissue.	
Place affected part near warm part of body.	Discuss the importance of warming the victim slowly and carefully.
Immerse frozen parts in warm water maintained at body temperature.	
Apply a sterile dressing to protect parts from infection.	
Prolonged exposure to cold may result in the following symptoms:	
Numbness	
Difficulty in movement	
Drowsiness	
Impairment of vision	
Unconsciousness	
Stoppage of breathing	
First aid care for prolonged exposure to cold follows:	
Bring victim into a warm room quickly.	
Rewarm victim as rapidly as possible by wrapping him in warm blankets or placing him in a tub of warm water (78°F to 82°F).	
Give victim, if conscious, a warm drink.	
Give artificial respiration if victim's breathing has stopped.	
COMMON EMERGENCIES	
Epileptic convulsions are probably the most common condition in which convulsions are seen.	Reads and reports on the causes of epilepsy.
Symptoms of epileptic convulsions include:	
Involuntary muscular movements, usually of brief duration	
Unconsciousness or semiconsciousness	
First aid care for epileptic convulsions follows:	
Loosen constrictive clothing.	Discusses possible steps to be taken by first
Do not restrain the victim in his convulsions,	

Content	*Suggested Student Activities*
but protect him from injury. Place a padded utensil between victim's teeth to prevent him from biting tongue. Loosen constrictive clothing. Do not disturb victim during the period of sleep which follows the seizure.	aider in protecting the epileptic victim from injury in classroom, playground, swimming pool.
Head injuries are one of the most common emergencies of childhood. They should never be neglected. The most common type of serious injuries are skull fracture and concussion.	Indicates why all head injuries should be regarded with utmost seriousness. Differentiates between a concussion and a skull fracture.
Symptoms of head injuries include: Drowsiness and unequal dilation of pupils Bleeding from ears, nose, and mouth Unconsciousness Severe headache Nausea Vomiting	
First aid care for head injuries follows: Keep victim lying down. Raise victim's head and shoulders slightly if his face is flushed. Conserve victim's body heat. Give no stimulants, such as coffee or tea. Get medical help.	
Simple fainting is a reaction of the nervous system that results in a temporary insufficient supply of blood to the brain. The victim usually recovers when in a prone position. Prevention and care of fainting are similar.	
First aid care for fainting follows:	
Have victim lie flat with head low or lower victim's head between knees.	Indicates why lowering of the head serves as a preventive measure in fainting.
Have victim remain in a lying down position until fully recovered.	Discusses importance of having a physician determine the cause of fainting.
Heart attacks occur when a part of the heart is denied an adequate blood supply.	

Content	*Suggested Student Activities*
Symptoms of heart attack may occur in combination, but usually one of the following is outstanding: Shortness of breath Chest pain Pale and cool skin Profuse perspiration **First aid care for heart attack** follows: Keep victim lying down and quiet or in sitting position. Provide adequate ventilation. Obtain medical help. Provide encouragement to victim.	Discusses the importance of diet, exercise, and medical checkup as preventive measures for heart disease.
Unconsciousness is the result of many and varied causes. Unconsciousness should always be considered a serious condition and the victim should be examined by a physician to determine the cause. Persons subject to blackout from diseases, such as epilepsy or diabetes may have medical wristbands or necklaces inscribed with first aid information. In cases of unconsciousness where cause is unknown, the victim may be classified in one of two groups: Cases requiring artificial respiration Cases where breathing is adequate	Reacts to this statement made by a prominent physician: Unconsciousness because of injury or illness is often a benevolent act of nature. Indicates why it is important to check the victim's personal articles for a health card.
First aid care for victims requiring artificial respiration follows: Administer artificial respiration. Get medical attention. Keep victim warm and quiet. **First aid care for victims whose breathing is adequate** follows: Lay victim down. Keep victim warm and quiet. Get medical attention.	Plays a role depicting a situation in which a victim is found unconscious. Describes the steps to take to determine cause of unconsciousness. Carries out the proper first aid procedures based on the findings.

Content	*Suggested Student Activities*
Foreign substances, such as dirt or a small object, may accidentally lodge in the eye, ear, nose, or throat. Food may lodge in the throat as a result of careless preparation or hurried and careless eating.	
First aid care for foreign substances in the eye follows:	
Specks in the lower lid may easily be seen and removed with moistened gauze or cotton.	
Foreign body on the upper lid may sometimes be removed by drawing the upper lid down over the lower lid and then looking up, down, to the left, and to the right and blowing the nose gently.	
If there is doubt about recovering the object without injury, place a sterile gauze over the closed eye and bandage the gauze in place. This helps to immobilize the eye.	Discusses first aid procedure if victim's eyeglasses have been broken, and the glass appears to be in the eye.
If the foreign body is imbedded in the eyeball, place a loose dressing over the injured eye and take the victim to a physician.	
First aid care for foreign substances in nose follows:	
Have victim blow nose gently to dislodge the object.	
Consult a physician if the object is not readily dislodged.	
First aid care for foreign substances in ears follows:	
Exercise extreme care when removing objects from the ears because of the danger of damaging the eardrum and causing infection.	Discusses the significance of the old saying: "Nothing smaller than the elbow should be placed in the ear."
Place a drop or two of mineral, olive, or baby oil into the ear. Tilt victim's head to allow the oil to run out. The object may flow out with the oil.	
Do not probe into the ear for the object.	
Consult a physician if this method fails.	
First aid care for foreign substances in throat follows:	
Determine whether or not the foreign object is obstructing breathing.	Indicates how to recognize a stoppage of breathing.

Do not interfere with victim's attempt to cough up object.

Do not probe the throat with fingers.

If the victim is a child, turn him upside down and smack him on the back between the shoulder blades.

Give victim artificial respiration and try to clear the airway with your fingers if breathing ceases.

TRANSPORTATION OF THE INJURED

In an emergency situation, one of the most important decisions to be made is whether or not the victim should be moved.

All life saving measures should be taken before an attempt is made to move an injured person.

An injured person must be moved only for the following reasons:

To remove him from immediate danger.

To make him more comfortable or to reduce pain.

To make it possible to perform adequate first aid.

Improper methods of transportation frequently make an injury worse and may even cause death.

BANDAGING AND DRESSING

There are many everyday emergencies which require bandaging and dressing.

In order for bandages to be effective they should be applied correctly.

A dressing is any material applied directly over a wound. Improvised dressings may be made from many materials, including handkerchief, towel, and shirt. Dressings are essential to:

Control hemorrhage

Protect the wound from contamination

Absorb fluids from the wound

Relieve pain, especially in the case of burns

Discusses first aid emergencies in which it would be necessary to transport an injured person.

Content	*Suggested Student Activities*
Bandages have many purposes. They may be used to wrap dressings and splints and to give support.	Using *First Aid Textbook* (American National Red Cross) as a source, practices bandaging.
A bandage should be applied snugly, but should not be too tight or too loose.	
Wherever possible the tips of the fingers and toes should be left exposed so that color changes may be observed.	
A bandage should be applied with the injured limb in the position in which it is to be carried.	

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ALCOHOL

FILMS

TITLE	*GRADE*	*VENDOR*	*COST*
ALCOHOL AND THE HUMAN BODY (15 min.) Explains graphically specific effects of ethyl alcohol on human body. Animated drawings depict principal body areas affected. Shows problem drinker in different stages of intoxication.	8, 11	SDH	Free Loan
ALCOHOLISM: THE REVOLVING DOOR (30 min.) Demonstrates early treatment of acute alcoholism with both psychotherapy and drug therapy; illustrates conditions on skid row and steps leading to alcoholism. Covers meetings of AA and discusses alcoholism as an illness which needs sympathetic treatment and understanding.	11	SKF	Free Loan
DAVID: PROFILE OF A PROBLEM DRINKER (27 min.) Portrays the causes and effects of liquor in the life of a young architect, analyzing some of the reasons which may lead to problem drinking.	11	MH	
DRIVIN' AND DRINKIN' (14 min.) Depicts facts about drinking as related to driving in order to motivate teen-agers to make a decision regarding the problems. The tone of the film is "leveling" with youth.	11	GM	$ 59.00
FOR THOSE WHO DRINK (37 min.) A film on alcoholism which discusses the physical, psychological, and social aspects of drinking.	11	SDH	Free Loan
THINKING ABOUT DRINKING (14½ min.) This is a straightforward presentation of the facts about alcoholic beverages emphasizing the effects on the body, the nervous sytem and behavior. An open-ended film for class discussion.	8, 11	BAVI	$165.00

FILMSTRIPS

ALCOHOL AND HEALTH This series alerts students to the dangers of alcohol and advises them how the habit may be controlled.	8, 11	EB	$ 6.00
SMOKING AND ALCOHOL (2 sound filmstrips, 1 10-inch LP record) SMOKING OR HEALTH ALCOHOL: FUN OR FOLLY Cartoon presentation on these subjects will appeal to youngsters as well as adults.	8, 11	BSC	$ 15.95

CONSUMER HEALTH

FILMS

TITLE	GRADE	VENDOR	COST
CHOOSING A DOCTOR (16 min.) Shows the importance of choosing a doctor before illness.	11	MH	
DIALOGUE WITH LIFE (25 min.) Shows advances made in health care and health insurance.	11	MTPS	
EVEN FOR ONE (28 min.) Describes the services of a general practitioner.	8, 11	SM or Local Medical Society	
FRAUD FIGHTERS (17 min.) Shows how government agencies maintain supervision over medicines, cosmetics, and other products.	8, 11	MH	
HEALTH FRAUD RACKET (28 min.) Shows how to spot quackery in the areas of food, drugs, cosmetics, and medical devices.	8, 11	NAC	Free Loan
HORIZONS UNLIMITED (28 min.) Depicts careers in medicine and allied fields: rehabilitation, social work, medical technology, dietetics, and others.	11	MTPS	
IMPROVING AMERICA'S HEALTH (11 min.) Shows how expanded health and medical services have increased life expectancy, and points out the importance of education.	11	COR	
JOURNEY INTO MEDICINE (36 min.) Provides insight into training in medicine and public health.	11	UW	
MEDICINE MAN (30 min.) Story of quackery in nutrition and agencies that seek to combat this.	8, 11	Local Medical Society	Free Loan
MISERY MERCHANTS (29 min.) Depicts the serious problem of arthritis quackery.	8, 11	AF	
QUACKS AND NOSTRUMS (19 min.) Shows ways in which medical quacks dupe the customer.	8, 11	MH	
REASON FOR CONFIDENCE (28 min.) Shows how FDA works to assure consumers of safe drugs and foods.	8, 11	NAC	Free Loan

FILMSTRIPS

DOLLARS FOR HEALTH	8, 11	ILI	Free Loan
EXPLOITED GENERATION (2 filmstrips and 2 records)	8, 11	GA	$ 35.00

DISEASE PREVENTION AND CONTROL

FILMS

TITLE	GRADE	VENDOR	COST
ART OF DETECTION (7 min.) A film on the art of detecting tuberculosis, which ends on a note of urgency by calling on the viewer to obtain a personal medical checkup, tuberculin skin test and chest X ray.	11	TRDA	Free Loan
BODY FIGHTS BACTERIA (15 min.) An excellent portrayal of the body's defenses against disease. It gives a clear explanation of immunization, both natural and artificial and stresses the importance of maintaining artificial immunization.	11	SDH	Free Loan
BREAST SELF-EXAMINATION (15½ min.) (Available in English or Spanish) The locale of this film is a physician's office. The patient consults her doctor because she is worried about what she believes to be an abnormality in her breast. After examining the patient, the physician assures the woman that no abnormality exists and then takes the opportunity to instruct her in the technique of examining her own breasts at home.	11	ACS	Free Loan
CASE AGAINST RUBELLA (10 min.) Presents the dangers of rubella (German measles) and the urgent need for immediate immunization.	8, 11	AS	Free Loan
CHALLENGE: SCIENCE AGAINST CANCER (32 min.) The research war against cancer is the subject of this film, presented through the story of the cell and its growth.	11	ACS	Free Loan
CONGESTIVE HEART FAILURE (8 min.) The purpose of this film is to correct the misconceptions that many people have about the term, heart failure. Causes, symptoms, and treatment of heart disease are briefly discussed.	8, 11	SDH	Free Loan
DANCE LITTLE CHILDREN (25 min.) This thought-provoking film centers around a syphilis outbreak among teen-agers in a typical American city. It illustrates the responsibility of the parents and gives information on some of the causes and possible answers related to the occurrence of the outbreak.	11	SDH	Free Loan
DEFENSE AGAINST INVASION (10 min.) This partially animated film by Walt Disney explains how vaccination immunizes the body against disease.	8	SDH	Free Loan
DIABETES AND YOU, TOO (21 min.) Symptoms of diabetes and the importance of early detection and control are related through the story of a 15-year-old student who tires too easily. Indicates diabetes is not confined to any age groups.	8, 11	SDH	Free Loan
DIABETES—WHAT YOU DON'T KNOW CAN HURT YOU (27 min.) In nontechnical language this film discusses the body processes involved in diabetes and the means of diagnosis and control. Explains achievements of scientific research in controlling the disease.	8, 11	AMES	Free Loan
ELUSIVE ENEMY (22 min.) Documentary, using young people who actually experienced TB or were positive reactors. Recalls history of TB, shows how it attacks, and how it is treated today.	8, 11	TRDA	Free Loan
ENEMY X (15 min.) Film opens with murder mystery technique, without mention of cancer, to arouse audience interest. Story then goes into subject of cancer with "surprise punch" to retain interest and get the message across forcefully.	11	SDH	Free Loan
ETERNAL FIGHT (18 min.) A dramatic story of man's age-long battle against communicable disease, tracing the development of protective measures by scientific and public health workers. Stresses the importance of worldwide cooperation in the control of disease.	8, 11	SDH	Free Loan
FACTS OF LIFE (14½ min.) A documentary of the history of the development of the mumps vaccine and tells the public about the availability of the vaccine.	8, 11	MERCK	Free Loan
FROM ONE CELL (14 min.) This film presents the subject of cancer in a very clear and objective manner.	11	SDH	Free Loan

TITLE	GRADE	VENDOR	COST
GIFT OF A LIFETIME (25 min.) A story of how a vaccine is produced in the laboratory and how it is tested in the field. A plea for having children protected against measles.	8	PR	Free Loan
INNOCENT PARTY (17 min.) How one young man in a moment of indiscretion contracts venereal disease and what happens to him and his "steady" girl. In terse dramatic sequences, "the innocent party" tells how he comes to learn the tragic significance of his ill-advised actions and to realize his responsibility to himself and to those he loves. A simple, sincere document of the nature, recognition, cure and control of syphilis.	8, 11	SDH	Free Loan
HER NAME WAS ELLIE, HIS NAME WAS LYLE (29 min.) A straight forward dramatic presentation for adolescent audiences of the seriousness of venereal disease. A story of a high school student haunted by the fear he is infected with syphilis and unaware of the private and public health services available for treatment. The film is forthright about the dangers of ignorance and "free and easy" sex relationships.	11	BAVI	
HOW TO CATCH A COLD (10 min.) A Walt Disney production planned with the guidance of leading medical and educational authorities. Shows how colds are spread; how a day in bed helps protect family, office and school groups.	8, 11	SDH	Free Loan
IMMUNIZATION (10 min.) Explains what immunization is and how immunity to infectious diseases is attained. Explains how vaccines for smallpox, pneumonia, and diptheria are prepared and used.	11	BAVI	
LAST CASE OF POLIO (20 min.) Intended to persuade the viewer to join in mass oral polio vaccine programs. History of polio vaccine and production of oral vaccine is described.	8, 11	LEDERLE	Free Loan
MAN AGAINST MICROBE (10 min.) Story of the highlights in the fight of science against preventable disease from the days of the London Plague to the present.	8	SDH	Free Loan
MANTLE OF PROTECTION (29 min.) Aims to heighten awareness of importance of early diagnosis, treatment and prevention of rheumatic fever.	8, 11	WYETH	Free Loan
MISSION MEASLES (20 min.) Shows seriousness of measles. Sketches diagnosis and treatment, discovery of measles virus by Dr. John Enders, and the development by him of an experimental vaccine.	8, 11	SDH	Free Loan
QUARTER-MILLION TEEN-AGERS (16 min.) Deals with the physiological aspects of gonorrhea and syphilis. Explains how the diseases are contracted, their progress in the body, and the need for treatment.	8	BAVI	
RABIES CAN BE CONTROLLED (14 min.) Depicts the simplicity of the dog vaccination procedure and stresses the importance of this protective measure.	8, 11	SDH	Free Loan
RESPECTABLE NEIGHBORHOOD (25 min.) Depicts the contributions of a local health department in the control of syphilis, and points out that syphilis is not restricted to the low socioeconomic groups but a problem in all areas.	11	SDH	Free Loan
TIME AND TWO WOMEN (18 min.) This film alerts women to the urgency of early detection of uterine cancer and explains the uterine cancer cell examination (the Pap Test).	11	SDH	Free Loan
TOWN AGAINST TB (30 min.) A documentary on the planning, execution, and results of a pilot community tuberculin testing program in a representative small city, this film provides a blueprint for community efforts in disease detection and immunization.	11	LEDERLE	Free Loan
TRAITOR WITHIN (10 min.) The biology of cancer is the subject of this film. This colorful, animated cartoon film studies the growth of cancer cells and how they spread; discusses methods of treatment; and emphasizes the need for early detection.	8, 11	ACS	Free Loan
UNCONDITIONAL SURRENDER (24 min.) Features laboratory scenes of the complete manufacturing process and testing of the Salk vaccine. It also urges vaccination of both children and adults, in an effort to reduce paralytic polio.	8, 11	SDH	Free Loan

TITLE	*GRADE*	*VENDOR*	*COST*
VD: EPIDEMIC (27 min.) Stresses the aspects of VD which are related to the following: (1) VD has been rapidly increasing in our nation and has reached epidemic proportions in a number of cities; (2) importance of early treatment; (3) the significance of the follow-up of contacts of infected persons; (4) the high cost of VD to our nation in dollars and health.	11	SDH	Free Loan
VD—NAME YOUR CONTACTS (22 min.) Venereal disease can be effectively treated today, but to combat its spread requires the cooperation of every person who has come in contact with this disease.	11	BAVI	
VD? SEE YOUR DOCTOR (22 min.) Linda and John contracted gonorrhea through a chain of circumstances. Both saw their doctors during the early stages of infection and cooperated with the Health Department. This very important film is a straightforward presentation of the cause, symptoms, and dangers of VD, with strong emphasis on the need for early treatment.	11	BAVI	
WACKY TALE OF WILFRED WICKENBUSH (11 min.) A treat for everyone who enjoys comedy of the Keystone Kops variety, with tongue-in-cheek commentary by Henry Morgan. The subject matter is colds.	8	SCHERING	Free Loan
WHAT WILL POOR ROBIN DO THEN? (27 min.) Tells the story of new vaccines now being used to help control rubella, commonly known as German measles.	8, 11	MERCK	Free Loan
WORLD OF MICROBES (30 min.) Covers changes which occur in living cells over a period of days, showing the life-or-death struggle that might go on inside the body of a person attacked by tuberculosis germs, and the results of chemotherapy.	11	TRDA	Free Loan

FILMSTRIPS

VENEREAL DISEASE (3 filmstrips and 2 records) Filmstrips based on much testing with students and the professional advice of leading medical men and educators.	8, 11	H	$ 75.00
SICKLE CELL . . . AN INHERITED DISEASE (filmstrip and record) This filmstrip helps to promote a better understanding of this disease—how it is inherited and why early diagnosis and treatment are essential.	8, 11	GL	$ 19.50
JENNIE (Filmstrip and record) Amusing cartoons urge breast self-examination for older high school girls. Filmstrip also explains Pap Test.	11	ACS	Free Loan

DRUG AND SUBSTANCE ABUSE

FILMS

TITLE	*GRADE*	*VENDOR*	*COST*
ALMOST EVERYONE DOES (14 min.) Recognizes and deals with the difficulties facing our young people today who are growing up in what is often referred to as our "drug society." The film probes into the social and psychological forces behind the drug scene.	8	WP	
BENNIES AND GOOFBALLS (20 min.) A government-sponsored film emphasizing the possible consequences of abusing amphetamines and barbiturate drugs.	8, 11	FDA	Free Loan
BEYOND LSD: A FILM FOR CONCERNED ADULTS AND TEEN-AGERS (25 min.) Parents try to understand what has gone wrong in their relationships with their teen-agers. Intended to stimulate thought and motivate discussion.	11	BAVI	
DRUG ADDICTION (22 min.) Tells the story of the hazards of drug addiciton. Explains the derivation of heroin, marijuana, and cocaine; employs animation to explain their physiological effects. Notes the relationship between crime and dope.	11	BAVI	
GROOVING (31 min.) Unscripted rap sessions about drugs among a group of teen-agers ranging in age from 14 to 18. The young people discuss the influence of peer pressure on their attitudes toward drugs.	11	BAVI	
HOOKED (20 min.) Young people describe their experiences with drug addiction. Not the voice of authority but of experience.	11	BAVI	
LAW: HOW EFFECTIVE IS IT? (36 min.) A lively discussion about the current marijuana laws by a panel featuring a former narcotics officer with the Los Angeles police force, a social psychiatrist, an attorney, and two medical doctors.	11	NET	$125.00
LOSERS (31 min.) An examination of the habitual use of chemicals and drugs among youths from twelve to twenty-one years. Shows harmful effects of glue-sniffing, pep pills, goofballs, and marijuana.	11	BAVI	
LSD: INSIGHT OR INSANITY (18 min.) The film documents the dangers of the unsupervised, capricious use of LSD, and explains what medical scientists know of the physiological and psychological effects of the drug.	11	BAVI	
MARIJUANA (34 min.) Sonny Bono, of Sonny and Cher, explores and explains in detail the reasons for not smoking marijuana.	8, 11	BAVI	
NARCOTICS: THE DECISION (32 min.) Tells the story of a teen-ager who becomes a narcotics user. Relates the situation to lack of parental supervision and affection. Depicts the transition from use of goofballs to addiction.	11	BAVI	
NARCOTICS TRADE (27 min.) Designed to give answers about the source of the narcotic problem. Where do narcotics come from? How are they grown, cultivated, harvested, processed, refined (from opium to morphine to heroin), and smuggled to our shores?	8, 11	SDH	Free Loan
SEDUCTION OF THE INNOCENT (10 min.) The story of a teen-age boy and girl who become addicted to narcotics. Shows their subsequent life of degradation and crime.	11	BAVI	
SEEKERS (31 min.) A documentary film about youth, their problems, their search—and drugs. The main participants are young people, all former drug users. They talk about their lives before, during, and after drugs. The focus of conversation is on the fundamental question: Why drugs?	11	BAVI	
SPEED SCENE: THE PROBLEM OF AMPHETAMINE ABUSE (17 min.) Offers evidence against the use of amphetamines in any form for other than medical reasons.	11	BAVI	
STOP . . . BEFORE YOU TRY DRUGS (20 min.) The vast scope of the problem is presented to the student, teacher, and parent alike. Provides the motivation for initiating valuable dialogue toward a better understanding of the drug problem.	11	BAVI	

TITLE	GRADE	VENDOR	COST
TRIP BACK (28 min.)	11	BAVI	
The story of a drug addict for 23 years who was able to overcome the drug habit. Originally a New York *Daily News* feature.			
TERRIBLE TRUTH (10 min.)	8, 11	SDH	Free Loan
With the cooperation of youth authorities and city and juvenile officers, this film tells about the narcotic habit and its tragic consequences. Documents the tragic story of one teen-age girl who started with an occasional marijuana cigarette, experimented with heroin, and finally became an addict with a criminal record.			

FILMSTRIPS

TITLE	GRADE	VENDOR	COST
CONTROL OF NARCOTICS	8, 11	EH	$ 5.00
Legislation controlling manufacture, sale, and distribution of drugs; addiction and treatment.			
DRUG MISUSE AND YOUR HEALTH (filmstrip and record)	8, 11	SVE	$ 9.50
Some common narcotics and other drugs that young people might be tempted to experiment with.			
DRUGS AND HEALTH	8, 11	EB	$ 6.00
This series alerts students to the dangers of drug habits and adivses how such habits may be controlled.			
DRUGS IN OUR SOCIETY (6 filmstrips, 3 records)	8, 11	SVE	$ 51.50
Alcohol: Decision About Drinking (Filmstrip and Record)			$ 11.50
LSD: Worth the Risk (Filmstrip and Record)			$ 11.50
Marijuana: A Foolish Fad			
Marijuana: A Foolish Fad (Filmstrip and Record)			$ 11.50
Narcotics: Uses and Abuses (Filmstrip and Record)			$ 11.50
Rx: Not for Kicks (Filmstrip and Record)			$ 11.50
Tobacco: The Habit and the Hazard (Filmstrip and Record)			$ 11.50
LET'S TALK ABOUT DRUGS	8	MMP	
An introduction to the subject of drugs for the nine-to-ten year old student. Its purpose is to inform the student of the nature of drugs and their role in the human experience.			
LSD: THE ACID WORLD (filmstrip and records)	8, 11	GA	$ 31.50
Confronts students with many points of view on the subject of hallucinogenic drugs. Emphasis clearly focused on the overriding dangers of LSD.			
NARCOTICS AND HEALTH	8, 11	EH	$ 5.00
Various types of drugs; where found and produced; use in medicines, anesthetics; effect of continual use, illegal use, etc.			
PROBLEMS OF DRUG ABUSE (2 filmstrips and record)		SVE	$ 20.00
Drug Abuse: Glue Sniffing and Pills (Filmstrip)			$ 8.50
Drug Abuse: Marijuana and LSD (Filmstrip)			$ 8.50
TRIPPING OUT (filmstrip and record or cassette)	8, 11	TO	$ 15.00
Designed to take students on an educational drug trip through the use of music, color, song, illustration, and narrative. It presents the classic components of various drug experiences.			

TAPE

TITLE	GRADE	VENDOR	COST
NARCOTICS AND DRUG ADDICTION	8, 11	TI	$ 6.50
Topic on teen-age level.			

TRANSPARENCIES

TITLE	*GRADE*	*VENDOR*	*COST*
DRUGS AND YOUR BODY Set of 20 Transparencies, 21 overlays	8, 11	PS	$119.00
Danger—Drugs in Use Read the Label Sample Prescription Label "Over the Counter" Drugs Prescription Warnings Routes of Entry of Drugs Skeletal System The Skin Possible Irritants of the Skin Muscular System Circulatory System Respiratory System Digestive System Nervous System Endocrine Glands (Pituitary) Endocrine Glands (Pancreas) Urinary System Drugs—Help and Harm Prevent Accidents Why the Emergency?			
SUBSTANCES THAT MODIFY MOOD AND BEHAVIOR (Cat. # 15-2798-5) 1 Basic Document 6 Teaching-Learning Guides and 6 Teacher-Student Resource Bibliographies 5 Prepared Color Transparency Sets (100 visuals). Each set contains 20 visuals. Individual sets of transparencies may be ordered.	8	3M	$183.95
INTERPLAYING FORCES IN USE OF MOOD AND BEHAVIOR MODIFIERS (Cat. #15-4895-7) Formulates situations which illustrate the interplay of personal, social, family, and environmental forces in the use, nonuse, or abuse of substances that modify mood and behavior.			$ 35.00
MOOD AND BEHAVIOR MODIFIERS: WHAT HAPPENS (Cat. # 15-4891-6) Describes the various modifications of mood and behavior that may result when an individual uses certain substances.			$ 35.00
PERSONALITY FACTOR AND DANGEROUS DRUGS (Cat # 15-4894-0) Identifies reasons why certain individuals might try and possibly become regular users of marijuana, narcotics, or other dangerous drugs.			$ 35.00
SUBSTANCES THAT MODIFY MOOD AND BEHAVIOR (Cat. # 15-2799-3) 1 Basic Document 6 Teaching-Learning Guides and 6 Teacher-Student Resources Bibliographies 6 Prepared Color Transparency Sets (120 visuals). Each set contains 20 visuals. Individual set of transparencies may be ordered.	11	3M	$215.95
DANGEROUS DRUGS: SITUATIONS OF USE (Cat. # 14-4995-5) Describes situations in which marijuana, narcotics, and other dangerous drugs are or might be used.			$ 35.00
DYNAMICS OF CHOICE INVOLVING MOOD & BEHAVIOR MODIFIERS (Cat. # 15-4996-3) Concludes that use, nonuse, or abuse of mood and behavior modifiers results from some dynamic of personal needs, social consequences, and the individual's perceptions about effects.			$ 35.00
HALLUCINOGENIC DRUGS (Cat. # 15-4994-8) Explains the appeal and the possible dangers in use of hallucinogenic drugs.			$ 35.00
PREDICTED EFFECTS OF MOOD AND BEHAVIOR MODIFIERS (Cat. # 15-4991-4) Translates knowledge about the effects of various mood and behavior modifiers into predictions about the behavior of those who use these substances under different circumstances.			$ 35.00

ENVIRONMENTAL AND COMMUNITY HEALTH

FILMS

TITLE	*GRADE*	*VENDOR*	*COST*
AIR POLLUTION—EVERYONE'S PROBLEM (20 min.) Emphasizes the causes, effects, and approaches to combating the air pollution problem.	8, 11	SDH	Free Loan
BETTER WATER FOR AMERICANS (10 min.) Emphasizes water quality and use, shows a water treatment plant.	8	SDH	Free Loan
CLEAN WATERS (27 min.) Emphasizes the importance of clean waters an an essential natural resource. Effects of water pollution are shown. Methods of sewage treatment developed to prevent pollution are shown.	11	SDH	Free Loan
FAMILY PLANNING (10 min.) Deals with the enormous overpopulation problem facing mankind today.	11	BAVI	
FIRST MILE UP (28 min.) This film is a study of the current air pollution problem. Factors involved in air pollution are discussed. Engineering and health authorities interviewed in the film present their comments on atmospheric pollution.	11	SDH	Free Loan
IT'S YOUR DECISION: CLEAN WATERS (14½ min.) Stresses need for immediate community action to ensure abundant supplies of clean water for the future. Emphasizes that the decision to have good sewage treatment depends on the determination of citizens to control pollution and to vote in favor of modern sewage treatment.	11	SDH	Free Loan
MAN ALIVE (THE WORLD HEALTH ORGANIZATION) (25 min.) Film gives an overall view of World Health Organization (WHO) and briefly describes many of its activities.	11	MH	
POPULATION AND POLLUTION (17 min.) Stresses the need for personal involvement and action on the part of students and adults.	11	IFB	$225.00
RIVER MUST LIVE (21 min.) A frank and photographically pleasing discussion of water pollution and what can be done about it. Microphotography shows natural organisms which help clean up pollution and the result of overloading a river with industrial and human wastes.	11	SDH	Free Loan
RUNAROUND (17½ min.) Senator Edmund S. Muskie sounds the call to action on the subject of air pollution. The film investigates the causes and sources of this environmental problem. It incorporates a most creative and sophisticated use of animation.	11	TRDA	Free Loan
TROUBLED WATERS (26 min.) Discusses the requirements of man for clean water and the pollution of water by sewage, chemicals, and thermal pollutants. Describes action taken by Federal, state, and local authorities to fulfill the need for pollution research, treatment, plant construction, and legislation. Narrated by Henry Fonda.	11	SDH	Free Loan
WATER (14½ min.) Outstanding for its skillful use of animation. Points out that, although there is as much water today as in the past, current technological demands, pollution, and waste create a serious modern problem which demands solution.	8, 11	SDH	Free Loan

FILMSTRIPS

ENVIRONMENT OF MAN (Set I: 5 filmstrips and 3 records) Deals with life forms and the precarious balance of nature on earth. Shows how the life support elements of air, land, and water are both used and abused by man. 1. Is There Life on Earth? 2. The Ocean of Air 3. Water, Clear and Otherwise 4. Of Food and Land 5. Energy Applied	8, 11	BAVI	$ 59.00

TITLE	*GRADE*	*VENDOR*	*COST*
ENVIRONMENT OF MAN (Set II: 5 filmstrips and 3 records) Survey of man's remarkable capacity for building in one area and destroying in another. 1. Population, the Numbers Game 2. The Concrete Habitat 3. The Busy-Body (Deals with internal pollution of the body and includes tobacco, alcohol, drugs, and narcotics.) 4. Unthinking Man 5. Man the Builder	8, 11	BAVI	$ 51.00
ENVIRONMENTAL CRISIS: WHAT THE INDIVIDUAL CAN DO Stresses the potential power of the nation's 60 million students in cleaning up our environment.	8,11	NEA	$ 15.00
TOPICS IN ECOLOGY (5 filmstrips and records)	8	MMP	
What Is Ecology? Defines ecology and guides student to see general applications of science of ecology to environmental problems.			$ 9.95
What Is Pollution? Defines pollution and stresses subjective nature of definition and individual choice of acceptable level of pollution.			$ 9.95
What Is Air Pollution? Analyzes sources of pollution, including automobiles, heating, manufacturing, nuclear testing, etc.			$ 9.95
The Automobile—Beyond Air Pollution Explores aspects of automobiles contributing to destruction of environment.			$ 9.95
Prosperity Equals Pollution Shows relationships among prosperity, full employment, high production, and pollution, and explores alternatives which could preserve envirnoment.			$ 9.95

MENTAL HEALTH

FILMS

TITLE	GRADE	VENDOR	COST
BOY TO MAN (16 min.) Deals candidly with the secondary and primary sexual changes in the male.	8	BAVI	
COMMUNITY MENTAL HEALTH (16 min.) This film shows how a community can work together with governmental agencies to achieve a broad mental health program once it sees the need for mental health facilities.	11	SDH	Free Loan
FEELINGS OF REJECTION (23 min.) Shows the importance of mental health and how childhood incidents can affect behavior throughout life. Describes a psychiatric case history of a young girl which has a happy ending.	11	SDH	Free Loan
GIRL TO WOMAN (16 min.) An important film for girls dealing with human growth and development during turbulent change from girlhood to womanhood.	8	BAVI	
HANDS (29 min.) Tells the story about psychiatric occupational therapy. The progress and recovery of a schizophrenic patient are recorded in a series of ceramic heads she makes in occupational therapy.	11	SDH	Free Loan
HOW ARE YOU? (15 min.) The lively technique of the animation cartoon is used to explain the nature of mental illness and emotional disorders in simple, readily understandable terms.	11	CD	Rental $ 3.00
INTRODUCING THE MENTALLY RETARDED (24 min.) The film introduces the mentally retarded beginning with some of the severely retarded and going on to those who are only moderately to mildly retarded. It points up the fact that there are those who are trainable and those who are educable. The film is designed to give a realistic introduction to some of the problems faced by the mentally retarded and to some of the helpful programs.	11	SDH	Free Loan
JOE AND ROXY (27 min.) Touches upon many problems facing today's teen-agers: going steady, planning for a secure future in an insecure world, seeing education in its proper perspective, and learning to make adjustments to daily living.	11	SDH	Free Loan
MENTAL HOSPITAL (20 min.) This story, which is projected from the patient's viewpoint, documents the day-by-day narrative of a mental patient, from admission to discharge from the hospital. It dispels the many legendary fears associated with disorders of the mind and of "asylum" confinement. An important contribution to public understanding of mental health.	11	SDH	Free Loan
MR. FINLEY'S FEELINGS (10 min.) An emotional-health film centering about a very important day in the life of Tom Finley, the principal character, who like most individuals is subject to normal emotional stresses. Its purpose is to stimulate an exchange of ideas about ways of meeting stress situations and handling day-to-day relationships with people.	11	SDH	Free Loan
PAGE 2 (11 min.) A seventeen-year-old's view of life in his middle class, Long Island community can be filled with unhappiness, searching, and frustration. The film speaks out on sex, drugs, the generation gap, and the frustrations of youth.	11	YFD	Rental $ 16.50
PHOEBE, STORY OF A PRE-MARITAL PREGNANCY (27 min.) Dramatizes the reaction of a teen-ager who discovers she is pregnant.	11	BAVI	
PHYSICAL ASPECTS OF PUBERTY (19 min.) An excellent presentation of total needs of adolescents with particular emphasis on physiological aspects of puberty. Two sections—one deals with physical maturation in boys, the other with physical maturation in girls.	8, 11	SDH	Free Loan
SOCIAL-SEX ATTITUDES IN ADOLESCENCE (22 min.) The life stories of a young married couple are presented and contrasted from the aspects of their sex education and sex adjustments.	11	SDH	Free Loan
YOU AND YOUR PARENTS (14 min.) An instructional film dealing with parent-child problems of adolescence and related emotional difficulties. Film attempts to promote understanding of adolescent behavior on part of both parent and child.	8, 11	SDH	Free Loan

TITLE	*GRADE*	*VENDOR*	*COST*
YOUR BODY DURING ADOLESCENCE (10 min.) Puberty, what it means and how it affects the body, is the theme of this film. Using animation the film shows the glands that regulate human life and growth.	8	SDH	Free Loan

FILMSTRIPS

THE ALIENATED GENERATION (3 filmstrips, 3 records) Examines some of the causes of alienation and the gap between generations.	11	GA	$ 40.50
BECOMING A MAN: MATURATION AND GROWTH (2 filmstrips, 2 records) Discusses the physical changes accompanying puberty, the psychological and social implications of developing masculinity.	8, 11	GA	$ 36.00
BECOMING A WOMAN: MATURATION AND GROWTH (2 filmstrips, 2 records) Discusses the physical changes accompanying puberty, the psychological and social implications of developing femininity.	8, 11	GA	$ 36.00
BEING RESPONSIBLE ABOUT SEX AND LOVE (2 filmstrips and record) Helps young people understand their sexual feelings and desires. Presents concept of "wholeness" of a person and implications of this concept for those who would make sex purely physical. Explores contradictory patterns of conduct and purposes of dating process. Defines sex act as a wonderful way of expressing love and sharing one's self.	8, 11	SVE	$ 16.50
DARE TO BE DIFFERENT The object is to stimulate teen-agers to think about the kinds of persons they want to be. Young people must be aware that, despite all pressures to conform, today's fast-moving technological age needs the ideas and work of creative nonconformists.	8	GA	$ 36.00
DATING TOPICS FOR OLDER TEENS (4 filmstrips and record) What About Going Steady When You're in Love Date Behavior Looking Ahead to Marriage	11	SVE	$ 25.00
DATING TOPICS FOR YOUNG TEENS (4 filmstrips and record) Ready for Dating Getting a Date What to Do on a Date How Do You Know It's Love?	8	SVE	$ 25.50
HUMAN GROWTH AND DEVELOPMENT (10 filmstrips and cassettes) Menstruation and Pregnancy Gestation and the Birth of a Baby Boy-Girl Relationships Dating (Boy) — Dating (Girl) Having a Party How Our Traits Are Inherited How Living Cells Divide How Sex Is Divided How Environment Influences Our Inherited Traits Endocrine Glands and Hormones	8	EPC	$143.00
LEARNING TO UNDERSTAND YOUR PARENTS (4 filmstrips, 2 records) Learning to Understand Your Parents Living With Brothers and Sisters Helping at Home Teen-Age Allowances	8	SVE	$ 29.95
TUNED-OUT GENERATION (2 filmstrips and record) Deals with problem of teen-age unrest and the lack of communication between youngsters and their parents.	11	GA	$ 29.95
VALUES FOR TEEN-AGERS: THE CHOICE IS YOURS This two-part, sound filmstrip speaks directly to teen-agers, in their own language. It deals with problems of immediate concern: what to do about sex, cheating, drinking, and, ultimately, what kind of person to become and what kind of values to embrace.	11	GA	$ 29.95

NUTRITION

FILMS

TITLE	*GRADE*	*VENDOR*	*COST*
EXPLORING YOUR GROWTH (11 min.) Using simple animation and fascinating photomicrography, the film explores the wonderful process that makes us grow. It explains digestion and how food allows cells to grow and divide, causing us to grow.	8, 11	SDH	Free Loan
FACTS ABOUT FIGURES (13½ min.) The film depicts one segment of the obesity problem, those who gain weight unnoticeably over a period of years. Its primary message is that without resorting to severe diets or food fads, a person can remove added weight with proper food intake and physical exercise.	11	SDH	Free Loan
FOOD FOR FREDDY (17 min.) The kinds of food essential to the good health of school-age children are described in this film about Freddy Mason and the example he sets for his classmates.	8	SDH	Free Loan
FOOD FOR LIFE (11 min.) This film serves as the basis for an interesting and informative class discussion on nutrition during pregnancy. It stresses the vital importance of diet to mother and child. The material presented applies to a young couple attending an expectant-parent class on nutrition.	11	SDH	Free Loan
FOOD THAT BUILDS GOOD HEALTH (11 min.) Jill and John assume the responsibility for preparing nourishing and interesting meals when their mother is called out of town.	8	BAVI	
FOOD THE COLOR OF LIFE (22½ min.) The objective of this film is to encourage a better diet and to emphasize the individual's responsibility for intelligent food selection.	11	NDC	Free Loan
FOR HEALTH AND HAPPINESS (11 min.) Shows a series of lively, joyous children who, from birth, have had the right food, exercise, sunshine, affection, companionship, and intelligent care. Illustrates positive signs of good growth and nutrition.	8, 11	SDH	Free Loan
FUNDAMENTALS OF DIET (11 min.) Good for summarizing nutrition classwork. Shows how plants are transformed by animals into food for human beings, and illustrates, by animal experiments, what happens in diet deficiencies.	11	SDH	Free Loan
HOME MANAGEMENT: BUYING FOOD (11 min.) Emphasizes the importance of preparing a grocery list and the dangers of impulse buying. Depicts home preparation foods; the use of frozen foods; the importance of cooking skill; and the preparation of less expensive meats for both large and small families.	11	SDH	Free Loan
HUMAN BODY: NUTRITION AND METABOLISM (13½ min.) This film distinguishes between basal metabolism and active metabolism and expresses the energy requirements of metabolism in units of calories.	11	SDH	Free Loan
IT'S ALL IN KNOWING HOW (14 min.) The film uses a combination of story and animated chart techniques in presenting to teen-agers the why and how of good food habits.	11	SDH	Free Loan
MAKING ENDS MEET (14 min.) Gives helpful suggestions on such details as planning menus ahead, buying in season, and budget-extending meat dishes to assist in making food money fo as far as possible.	11	SDH	Free Loan
MENU PLANNING (10 min.) Illustrates the importance of planning menus which meet the requirements of good health, satisfy individual tastes, maintain household budgets, and keep preparation time within practical limits. Aims to provide new insights into the significance of the role of well-planned meals.	11	SDH	Free Loan
MORE FOOD FOR YOUR MONEY (11 min.) This film is concerned with meal planning for the family. It explains food budgeting to assure balance in food supply and nutrition.	11	SDH	Free Loan
NUTRITION: SENSE AND NONSENSE (22 min) This film urges the consumer to be intelligently skeptical about nutrition information being circulated through popular channels.	8, 11	SDH	Free Loan

TITLE	*GRADE*	*VENDOR*	*COST*
OWL AND FRED JONES (14½ min.) This film shows that habits are what you make them and explains how they can be controlled. Emphasis is on the habit of overeating.	8, 11	SDH	Free Loan
SCHOOL THAT LEARNED TO EAT (22 min.) A story of 300 children and eight teachers in a small Georgia school who wanted to improve their health standards. While principal emphasis is given to school lunch and nutrition, other phases of healthful living are emphasized.	8	SDH	Free Loan
SOMETHING YOU DIDN'T EAT (8 min.) In a Walt Disney film, Jiminy Cricket tells why the body needs foods from the basic groups each day. Uses the analogy of an automobile to point out that proper foods must be eaten to build the body, supply energy, and maintain the body in good condition.	8	SDH	Free Loan

FILMSTRIPS

BREAKFAST AND THE BRIGHT LIFE (Includes teachers guide and 1 LP record) Colorful presentation seeks to motivate youth to improve their nutrition by emphasizing the importance of breakfast to physical and mental performance, attitudes, and health.	8, 11	CI	Free
HOW FOOD BECOMES YOU (Includes teachers guide and 1 LP record) Presents many aspects of how the food we eat becomes us. Gives suggestions for demonstrations, experiments, and additional activities to reinforce the visuals in the filmstrip. One of the major values of the filmstrip is its use in providing motivation to stimulate the child to examine his food habits.	8	NDC	$ 5.00
YOUR FOOD—CHANCE OR CHOICE? This filmstrip is designed especially for the "now" generation—today's teen-agers. New techniques and ideas are combined to involve teen-agers in analyzing their own food choices. Rock music and disk-jockey-type narrator for the young sound and stop-and-talk sessions to create involvement are included in this innovative filmstrip.	8, 11	NDC	$ 5.00

SAFETY AND FIRST AID

FILMS

TITLE	GRADE	VENDOR	COST
ACCIDENTALLY YOURS (14 min.) A typical suburban couple introduces types of accidents which commonly occur in the home—those involving glass doors, plastic bags, and power mowers—and points out way in which these accidents could have been avoided.	8, 11	BAVI	
BE WATER WISE: SWIMMING (25 min.) This film shows how to enjoy safe swimming whether using controlled swimming facilities or unsupervised waters. Shows how to apply mouth-to-mouth resuscitation.	8, 11	SDH	Free Loan
BICYCLIST (15 min.) Safey education entertainingly presented through the pointed experiences of a red bicycle owned by two kinds of small-boy riders—the kind who obeys the rules and the kind who doesn't.	8	SDH	Free Loan
BOATING SAFETY "B" COURTESY AFLOAT (16 min.) The film contains overall recommendations for small-boat safety.	8, 11	SDH	Free Loan
BREATH OF LIFE (16 min.) The film shows when and where to use mouth-to-mouth resuscitation. A variety of situations are shown, including a classroom sequence, dramatic reenactments, and demonstrations.	8, 11	SDH	Free Loan
BREATHING FOR OTHERS (14 min.) How rescue breathing saves lives in situations of asphyxia, drowning, gassing, electric shock, and suffocation. Demonstrations of mouth-to-mouth and mouth-to-nose techniques are included.	8, 11	BAVI	
CHECKING FOR INJURIES (16 min.)	8, 11	ARC	Free Loan
DONALD'S FIRE SURVIVAL PLAN (11 min.) Suggests ways to prevent loss of homes and lives by fire.	8	BAVI	
DROWNPROOFING (8 min.) This film shows how to stay afloat and travel in water even if you have never learned to swim.	8, 11	BAVI	
FIRST AID NOW (10 min.) This film presents in a realistic manner procedures in the four major areas of first aid: bleeding, breathing, broken bones, and burns. The film offers detailed instructions on mouth-to-mouth resuscitation and external cardiac massage. (External cardiac massage is not an accepted first aid procedure for the Standard Course.)	8, 11	SDH	Free Loan
FIRST AID ON THE SPOT (10 min.) This film makes a vital contribution to all courses and programs on first aid instruction. It demonstrates approved first aid treatment as set forth in the American Red Cross *First Aid Textbook*.	8, 11	SDH	Free Loan
FIRST AID: PARTS I AND II (28 min.)	8, 11	SDH	Free Loan
FUN 'N FATHOMS (27 min.) An exceptionally well-done film covering the precepts of safe scuba diving along with a well-outlined plan of instruction. The importance of qualified training and instructors is emphasized.	8, 11	SDH	Free Loan
HEART ATTACK (23 min.) The symptoms, latest emergency first aid, treatment, hospital care, and self-care of a victim of a heart attack are presented and described.	8, 11	BAVI	
HELP PREVENT FIRES (12 min.) Everyone interested in fire prevention education will find this film unique. With its fascinating background music, it is both informative and entertaining.	8	SDH	Free Loan
HOW TO FIGHT A FIRE IN THE KITCHEN (5 min.) Points out that one of the most common types of fires is one which starts over a kitchen stove. Shows how such fires can be extinguished easily and quickly.	8	SDH	Free Loan
HOW TO HAVE AN ACCIDENT IN THE HOME (8 min.) A Walt Disney technicolor film presenting a humorous portrayal of home accidents. Features Donald Duck as the average person. Shows how accidents can happen in every room of the house, and suggests precautions which can be taken to prevent them.	8	SDH	Free Loan

TITLE	*GRADE*	*VENDOR*	*COST*
NO TIME TO SPARE (12 min.) The back-pressure, arm-lift method of artificial respiration is demonstrated in a variety of situations.	8, 11	BAVI	
NUCLEAR RADIATION FALLOUT (15 min.) Explains the phenomenon of the nuclear explosion with the resulting spread of radioactive debris in the atmosphere.	11	SDH	Free Loan
PLANNED ESCAPE FROM FIRE (11 min.) Shows the needs and methods of preplanned escape from home fires.	8	BAVI	
POISON IN THE HOUSE (10 min.) Colorful puppets help this film effectively point out the hazards of poisons which may be carelessly left within a child's reach.	8	SDH	Free Loan
PULSE OF LIFE (27 min.) Latest methods of resuscitation, including mouth-to-mouth breathing and external heart compression, are demonstrated. (External heart compression is not an accepted first aid procedure for the Standard Course.)	8, 11	BAVI	
RESCUE BREATHING (22 min.) Teaches the simple procedures of rescue breathing (mouth-to-mouth or mouth-to-nose). Teaches how to recognize the signs and symptoms of suffocation and what to do until trained help arrives.	8, 11	SDH	Free Loan
SAFE LIVING AT SCHOOL (11 min.) Common causes of mishaps are shown. A child's responsibility for accident prevention is emphasized.	8	BAVI	
SAFETY IN THE HOME (10 min.) Presents, graphically, the rate and annual toll of home accident injuries, with attention to the most common sources of accidents in and about a typical home, and suggestions for their elimination.	8	SDH	Free Loan
SAFETY ON THE STREET (20 min.) The film points to the high mortality rate in children due to pedestrian-type accidents. Via demonstrations, children are taught to make decisions for safety.	8	SDH	Free Loan
SECONDS COUNT (15 min.) Incidents dealing with drowning and asphyxia problems emphasize the need for speed in applying emergency resuscitation by mouth-to-mouth method.	8, 11	BAVI	
SEE A PIN (15 min.) The film demonstrates the fire hazards prevalent in most homes unless necessary precautions are taken. Electrical wiring, poor housekeeping, smoking, and carelessness of children are covered.	8, 11	SDH	Free Loan
STOP, LOOK AND THINK (13 min.) A pedestrian safety film to show children proper safety techniques while on foot.	8	BAVI	
SURVIVAL SWIMMING (14 min.) Advanced preparation to avoid water accidents and to provide a course of action to meet the problems of water accidents.	8, 11	BAVI	
TROUBLE TAKES NO HOLIDAY (18 min.) This film clearly demonstrates the hazards and consequences which develop from false alarms being sounded on school property.	8, 11	SDH	Free Loan
YOUR CLOTHING CAN BURN (13 min.) This dramatic color film shows which clothing fabrics are most easily ignited and which are safest.	8	SDH	Free Loan

MANNEQUINS

RESUSE-KATE 24 in. full-bodied mannequin of a child for use in resuscitation training.	8, 11	SA	
RESUSCI ANNE AND RESUSCI ANDY Life size for use in resuscitation training.	8, 11	GS	
RESUSCI BABY Lifelike baby mannequin for training in mouth-to-mouth resuscitation.	8, 11	LM	

SMOKING

FILMS

TITLE	*GRADE*	*VENDOR*	*COST*
AS WE SEE IT (25 min.) This film tells the story of smoking and breathing for children and parents alike. It shows preteen youngsters making a TV documentary for their parents and conducting interviews with eminent authorities while their parents watch. The involvement of the preteens is especially ingenious.	8, 11	TRDA	Free Loan
BREAKING THE HABIT (5 min.) Simple but clever cartoon of two "characters" discussing breaking the smoking habit.	8, 11	ACS	Free Loan
HUFFLESS PUFFLESS DRAGON (8 min.) This film endeavors to change the image of smoking from being "in" to being "out" and in so doing manages to focus on some of the pressures placed on children to begin smoking. An educational message is attained through a "hip" character named Dragknight.	8	ACS	Free Loan
IS SMOKING WORTH IT? (19 min.) This film presents facts about the relationship between cigarette smoking and lung cancer. Graphs, chemical tests on smoking machines, and laboratory tests on mice are used to demonstrate the smoking-lung cancer relationship. A discussion among teen-agers on their attitudes toward smoking is presented.	8, 11	SDH	Free Loan
LET'S DISCUSS SMOKING (17 min.) This film shows a group of high school students discussing the pros and cons of cigarette smoking with a psychology professor.	11	SDH	Free Loan
LIFE AND BREATH (15 min.) Years of smoking to be in with the crowd, to relieve daily tensions made young George Harrison an emphysema patient who learns in this film how this deadly disease almost shortened his life if it were not for modern respiratory therapy. The film takes a strong stand against cigarette smoking.	8, 11	TRDA	Free Loan
NO SMOKING (10 min.) (Revised Edition) Film emphasizes the dangers of smoking to the health of our nation and discourages young people from starting.	8	BAVI	
POINT OF VIEW (19 min.) (Available in English and Spanish) A series of humorous sequences (interspersed with a few serious moments) designed to make cigarette smoking a subject for ridicule instead of an open sesame to glamor, good fellowship, and adulthood.	8, 11	TRDA	Free Loan
SMOKE, ANYONE? (9 min.) With the release of the Surgeon General's report on smoking, this film was produced to urge junior high school and high school students not to smoke. The film aims toward affecting attitudes either before the habit is acquired, or soon after smoking starts, so that breaking the habit will not impose too great a hardship.	8, 11	SDH	Free Loan
SMOKING AND HEALTH: A REPORT TO YOUTH (13 min.) The evidence against smoking is presented, in part, through animation photography.	8, 11	BAVI	
SMOKING AND YOU (11 min.) This film was produced by the Central Office of Information in England. The film was made for all ages but aims particularly at the young boy and girl who have not yet acquired the smoking habit. Of interest to every organization interested in the smoking problem and how it affects one's health.	8, 11	BAVI	
SMOKING: PAST AND PRESENT (25 min.) The history of smoking as well as the health hazards are graphically portrayed in this film.	8	ACS	Free Loan
TIME FOR DECISION (19 min.) Cigarette smoking as a social community problem is presented in this humorous cartoon calling for community action. Emphasis is on the effects of advertising.	8, 11	ACS	Free Loan
TIME TO STOP IS NOW (5 min.) This very short film shows lung damage due to smoking and how the body repairs damage if smoking is stopped.	8, 11	ACS	Free Loan
TOBACCO AND THE HUMAN BODY (15 min.) An authentic report on the scientific results of modern research on the effects of the use of tobacco. The film analyses the contents of tobacco smoke, demonstrates some of the physiological effects of smoking, and sums up the factors to be considered in deciding whether or not to smoke.	8, 11	SDH	Free Loan

TITLE	GRADE	VENDOR	COST
TOO TOUGH TO CARE (18 min.) Catches the fictitious Finster Tobacco Company in a moment of crisis: What advertising theme can they use to win over the young people, and combat all this talk about lung cancer and heart disease?	8	TRDS	Free Loan
WHAT ABOUT SMOKING (11 min.) Since smoking can become a dangerous habit, it is essential that teen-agers be educated about the hazards before they begin experimenting with cigarettes as well as after they take up smoking regularly. Each person is responsible for making choices which are necessary for his own welfare, the welfare of his family, and of his community.	11	BAVI	
WHO, ME? (19½ min.) Film illustrates thinking of a teen-ager and also the smoking parent in relation to the hazards of smoking. The film is not too technical.	8, 11	ACS	Free Loan

LIST OF VENDORS

Code	
ACS	American Cancer Society (Local ACS Unit)
AF	Arthritis Foundation 221 Park Avenue South New York, NY 10003
AMES	Ames Company Division Miles Lab. Inc. 1127 Myrtle Elkhart, IN 46514
ARC	American Red Cross (Local ARC Unit)
AS	Association Films 600 Grand Avenue Ridgefield, NJ 07657
BAVI	Bureau of Audio-Visual Instruction New York City Board of Education 131 Livingston Street Brooklyn, NY 11201
CD	Communications Division Nebraska Psychiatric Institute 602 East 44 Street Omaha, NE 68105
CI	The Cereal Institute 135 Sough LaSalle Street Chicago, IL 60603
COR	Coronet Instructional Films 65 East Water Street Chicago, IL 60601
EB	Encyclopaedia Britannica Education Corp. 425 North Michigan Avenue Chicago, IL 60611
EH	Eyegate House, Inc. 146-01 Archer Avenue Jamaica, NY 11435
EPC	Educational Progress Corp. 1812 First National Bldg. Tulsa, OK 74103
FAEF	Film Associates Educational Films 11559 Santa Monica Blvd. Los Angeles, CA 90025
FDA	Food and Drug Administration 201 Varrick Street Room 1051-A New York, NY 10014
GA	Guidance Associates Pleasantville, NY 10570
GL	Glenn Educational Films, Inc. Post Office Box 371 Monsey, NY 10952
GS	Guardian Safety Equipment Co. 37 East 21 Street Linden, NJ 07037
H	D.C. Heath & Co. 2700 N. Richardt Avenue Indianapolis, IN 47401
IFB	International Film Bureau 332 South Michigan Avenue Chicago, IL 60604
ILI	Institute on Life Insurance Education Division 488 Madison Avenue New York, NY 10022
LM	Laerdal Medical Corp. 136 Marbledale Road Tuckahoe, NY 10707
MERCK	Film Library Merck Sharp & Dohme West Point, PA 19486
MH	McGraw-Hill Text Film Department 330 West 42 Street New York, NY 10036
MMP	Multi-Media Productions, Inc. 580 College Avenue Palo Alto, CA 94306
MTPS	Motion Talking Picture Service 1212 Avenue of Americas New York, NY 10036
NAAC	Narcotics Addiction Control Commission (Local NAAC Office)
NAC	National Audiovisual Center (Annex) Station K Atlanta, GA 30334 Att: Distribution
MDC	Dairy Council 60 East 42 Street New York, NY 10017
NEA	NEA Publication-Sales 1201 Sixteenth Street, NW Washington, DC 20036
NET	NET Film Services Audio-Visual Center Indiana University Bloomington, IN 47401
PR	Philips Roxane Laboratories, Inc. 330 Oak Street Columbus, OH 43216

Code	
PS	Popular Science Publishing Co. Audio-Visual Division 355 Lexington Avenue New York, NY 10017
SA	Simulaids Woodstock, New York 12498
SDH	Film Library Supervisor Office of Public Health Education New York State Department of Health Albany, NY 12208
SKF	Smith Kline & French Laboratories 1500 Spring Garden Street Philadelphia, PA 19101
SM	Sterling Education Films 241 East 34 Street New York, NY 10016
SVE	Society for Visual Education, Inc. 1345 Diversey Parkway Chicago, IL 60614
3M	3M Business Products Sales, Inc. 75-07 Main Street Flushing, NY 11367
TI	Tama, Inc. 608 Second Avenue South Minneapolis, MN 55402
TRDA	Tuberculosis & Respiratory Disease Assn. (Local TRDA Unit)
UW	United World Films 221 Park Avenue South New York, NY 10003
WP	Wombat Productions, Inc. 87 Main Street Hastings-On-Hudson, NY 10706
YFD	Youth Film Distribution Center 4 West 16 Street New York, NY 10011

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